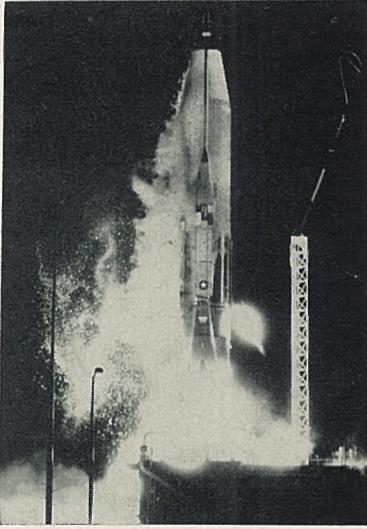
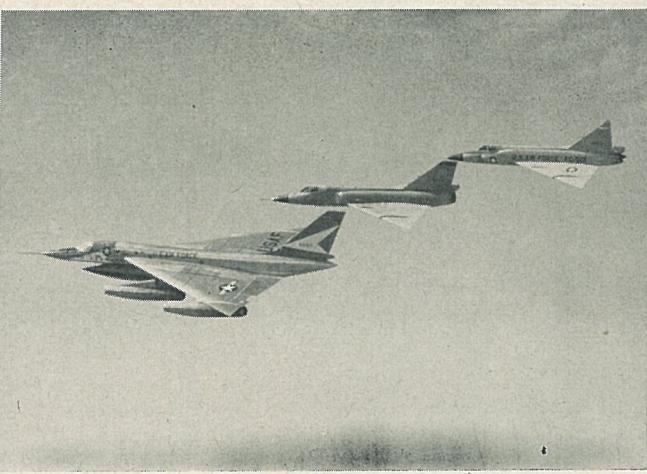
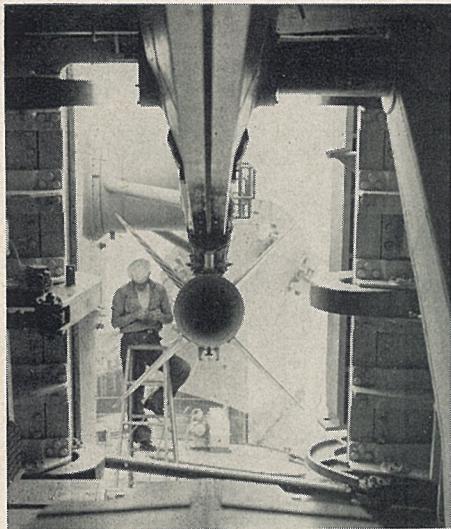


These Topped Convair News in '58



NEWS MAKERS—These six products made many a headline during 1958 and doubtless will continue to do so in 1959. Biggest and blackest were earned by

Atlas missile, far right, but others had their share. From left, Terrier missile aboard USS Gyatt; jet 880 at roll-out; B-58, F-106 and F-102 in aerial rendezvous.



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

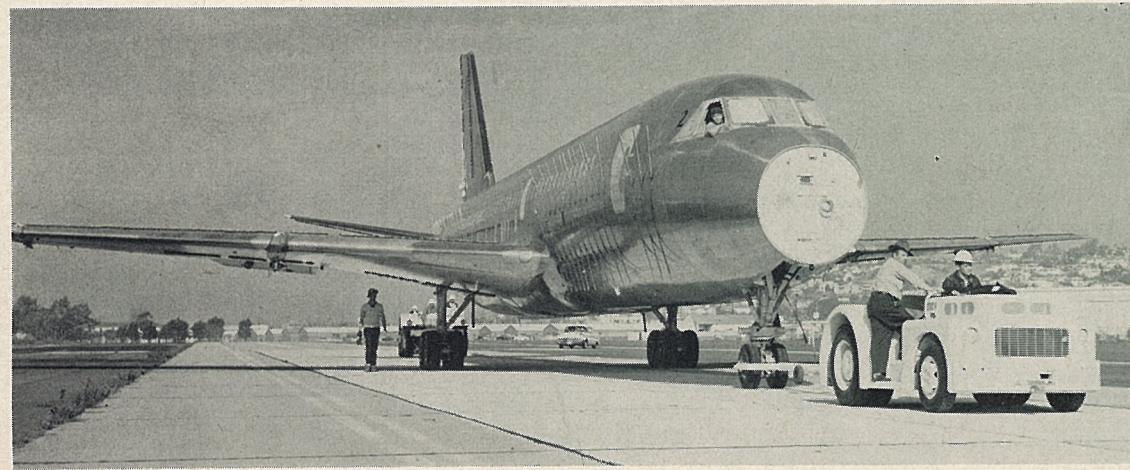
Convairiety

Vol. 12, No. 1

Wednesday, January 7, 1959

SAN DIEGO, POMONA AND ANTELOPE VALLEY, CALIFORNIA

DAINGERFIELD AND FORT WORTH, TEXAS



DOWN THE RUNWAY—Second Convair 880 jet transport was the first 880 to move onto Lindbergh Field runways as it was towed from San Diego Plant 1 to the seaplane ramp to go into structural testing. It moved out of final assembly the day before Christmas.

ROY ASHE NAMED BUDGET DIRECTOR

Roy F. Ashe last week was appointed director of budgets and estimating in Convair's General Offices, reporting to R. R. Brewton, controller.

Ashe, who has been with Convair for nearly 20 years, was succeeded as 880 administrator by Arthur J. Braudic.

It is Braudic's second time in the position. He was 880 administrator up until he left the company in May, 1957, at which time Ashe took over. Braudic returned to Convair in long range planning in March, 1958.

Ashe is a native of Luther, Minn., and holds a law degree from Balboa University. He joined Convair in 1939 in experimental and held a number of production posts before transferring to estimating in 1951. He was president of the SD Management Club in 1952.

ASTRO FOLK GIVE \$7,000 TO NEEDY

While some reports continue to trickle in, it appears that Convair Astronautics employees contributed well over \$7,000 to assist the needy during the recent holiday season.

Aided were more than 80 families, each composed of an average of five to six members.

So many different departments and functions took part that it is impossible to name them all. Some took needy families and provided for them. Others donated money. Typical of this trend were engineering functions who collected \$1,015 alone. This was in lieu of exchanging Christmas cards.

A special bank account was set

Jet 880 Taxi Tests Begin Over Lindbergh Field

Taxi tests for the first Convair 880 jet transport are scheduled for this week at Lindbergh Field.

Crews have been working day and night throughout the holidays and weekends (except for Christmas Day) to push tests on plane No. 1 in field operations and plane No. 2 in structures test laboratory to meet deadlines before the first plane takes to the air the last of January.

"To date, all field operations tests have proved satisfactory," said F. G. Brown, field operations foreman, "with no problems developing to hold up our tight schedule."

Following first slow taxi, the huge craft will go to the seaplane ramp for 11 days of vibration tests and then back to field operations location for preparation for its shake-down flight, said F. F. Stevens, general foreman.

The second Convair 880 is now well into a structural test program at the ramp after leaving final assembly Dec. 24.

Control systems are being checked out now before the first plane goes into flight tests. Primary control group of dynamics laboratories under J. W. Mansfield, assistant test group engineer, is in charge of flight con-

trol systems ground tests.

It will then go into an extensive structural test program to last until late summer under supervision of E. F. Strong, chief of structures and material laboratories.

A. R. Vollmecke and his crew are load testing all control surfaces with the plane simulating actual flight while tied down in one spot.

Straps run from the more than 350 tension pads glued to the plane's wing and tail to hydraulic cylinders bolted to ceiling and floor of the hangar. Around 80 aluminum straps riveted to the fuselage also are attached to the cylinders which put the plane under load by flexing wings and fuselage.

Rise Expected In Employment For SD Area

Predictions for Convair in 1959 were generally optimistic and challenging as reflected last week in statements issued by General Dynamics Corporation and Convair Division executives.

Pace

Frank Pace Jr., president of General Dynamics: "New basic concepts of the transportability of men and materials are undergoing radical inquiry at Convair Division, the results of which will certainly shrink the dimensions of the world as we know it and will probably allow men for the first time to leave this earth for protracted periods"

Naish

J. V. Naish, president of Convair: "Average employment totals for the General Offices, San Diego and Astronautics Divisions will be 41,700 during 1959, compared with 35,400 during 1958 . . . San Diego Division will average 26,000 employees with about 1,850 stationed at various test and operational bases away from San Diego. This year's (1958) average for the division was 24,400 with 3,050 employed off-site . . . Astronautics Division employment will increase from an average of

(Continued on Page 2)

Orbiting Atlas Major Convair Triumph in '58

Convair's Atlas ICBM which literally lifted itself into space by its own "boot straps" last month has captured the fancy of the whole world.

Few events in recent history have been so discussed.

The big "space bird," a product of Convair Astronautics, blasted off its Florida launching pad just after dark Dec. 18. Onlookers saw it paint a flaming trail into the heavens. Instead of roaring toward a South Atlantic impact point, as others before it have, the Atlas climbed into space. It began an egg-shaped orbit, 914 miles from the earth at apogee and only 118 miles at perigee. It weighed over four tons and was said to be traveling at speeds of about 17,000 miles per hour, making a circle of the earth approximately once every 100 minutes.

The Pentagon had a name for the operation—Project Score, after the first letters of the words signal, communications, orbit, relay equipment.

But to the man on the street it has been simply "the Atlas."

There are many interesting facts about the project. Many have been told and re-told through news media. Others remain the exclusive property of the military and scientist. To Convair men and women, particularly those who build the Atlas, two key points stand out. Foremost is the extreme secrecy which marked the planning and execution of the "shot." The other is the unique communications system aboard.

While thousands helped build, test and launch the Atlas into orbit, less than 100 persons were reported to have known in advance of its intended use as a satellite. Sixteen of these were Astro men.

"Naturally, this meant restricting the information to only those who 'had to know,'" J. R. Dempsey, Astro Division manager, explained. "Scores of our top people were not informed. This was not

(Continued on Page 8)



IT'S ORBITING NOW—Roy Johnson, right, director of Advanced Research Projects Agency, autographs Atlas missile satellite during visit to Astronautics plant June 6, 1958. It was during this visit that J. R. Dempsey, left, Astronautics Division manager, and his staff proposed that entire missile be launched into orbit. Project was closely guarded secret until President Eisenhower's announcement last month.



KERPLUNK!—Astro girls toss money for charity at last minute before Bldg. 2 reflecting pool was drained. Nearly \$1,000 was found beneath surface.

ASTRO FOLK GIVE \$7,000 TO NEEDY

(Continued from Page 1)
up to handle all money. While employee services administered the fund, all expenditures were investigated and approved in advance by representatives of the Employees' Con-Trib-Club committee.

Of general interest to all were the coins tossed in the Bldg. 2 reflecting pool. When drained Dec. 23 it yielded \$995.31. (For the record, there was also one key, three pesos, a Canadian nickel, an English half-crown and a slug from a Nevada gambling house.)

The Christmas fund from the pool was used to buy gifts and other items for 14 families consisting of some 60 members. Each family received a check of from \$50 to \$100, dependent upon need.

In addition, 13 teen-agers and 42 youngsters under 5 years received gifts and clothing. They were the brothers and sisters of 117 youngsters who attended a Con-Trib-Club—Salvation Army sponsored party at the plant Dec. 20. The party was for those between the ages of five and 12 only.

New Style of Paycheck to Appear Friday For San Diego Division

A new type of payroll check will be in the hands of all hourly and flat-salaried employees at Convair San Diego this Friday (Jan. 9).

(Only SD Division is affected. Astronautics checks remain the same.)

The familiar tab card checks have been discarded in favor of paper checks to permit use of the electro data processing method to speed payroll operations, said J. L. Terrien, payroll supervisor.

The new check itself is 5 inches in length with a 7-in. stub containing a great deal more salary and deduction information than the former checks.

All payments to the employee will be included in the new checks with the single exception of Employee Suggestion awards, which will be paid separately as in the past, said Terrien. Vacation and sick leave time will hereafter be included in the regular checks of hourly employees, at the time department clerks submit the necessary information to the payroll department.

Total hours worked have been broken down into regular, overtime, and double-time paid. Adjustments due the employee will

KSDO Will Broadcast Coggan Address to SD Management Club

Radio station KSDO will broadcast a talk by B. F. Coggan, San Diego Division manager and Convair vice president, entitled "Management Copes with Speed, Spirit and Space," Jan. 14 at 8 p.m.

Coggan will be the principal speaker at a meeting of the Convair San Diego Management Club in the Palm Room of the U. S. Grant Hotel.

Theme of the meeting, sponsored by the industrial engineering department, will be "Management Prepares for the Space Age."

In his presentation, Coggan is expected to discuss qualities of a good manager, human factors in the coming space age, and utilization of space exploration for peaceful purposes.

Also on tap for the meeting (but not to be broadcast) will be presentation of the Mug of the Year award and MacSave-it awards for November and December.

After dinner entertainment will be provided by the Convair SD Choralaires under the direction of W. A. Vogel (Dept. 8).

College Counselor Service Available

Counselors from San Diego State College will be available by appointment at Convair San Diego the latter part of January.

Plant 1 employees may obtain counseling Jan. 28 in the training office. Appointments should be requested by calling M. M. Saunders, ext. 491, Plant 1. The same service for Plant 2 employees will be available Jan. 29. Appointments can be made by calling L. E. Woll, ext. 211, Plant 2.

New students filing for admission to the college must do so by Jan. 9. Graduates and those seeking readmission should file before Jan. 30 or on Feb. 7.

Is It News?
Call Convairiety

Advancing Employment Slated For Convair in San Diego Area

(Continued from Page 1)
10,700 (during 1958) to 15,435 during 1959. The (Astro) average employment at operational and test bases will increase from 2,000 to 2,700 . . .

Coggan

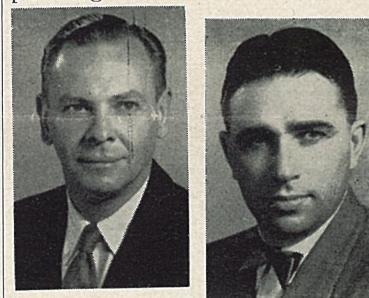
B. F. Coggan, SD Division manager: "Acceleration of the 880 and F-106 programs will create increased and steady employment for SD Division in 1959. Research and development programs also will be accelerated to keep Convair in the forefront of the aviation industry . . . The first 880 was rolled out of the factory Dec. 15, 1958. Six more of the big airliners will be factory-completed during 1959 and at least five and possibly six will be flying before the end of the year . . ."

Dempsey

J. R. Dempsey, Astronautics Division manager: "Astronautics will grow in 1959. Development tests will continue in Florida, but program emphasis will shift from testing to supporting the missile at Strategic Air Command bases. Integrated weapon system training will be under way at Vandenberg AFB, and a build-up of Convair personnel at Warren AFB, Cheyenne, Wyo., has begun. The build-up at Warren will continue most of the year, reaching a peak

Esenwein Appointed New Executive VP

(Continued from Page 1)
sales, and of E. P. Wohl, director of planning, as vice president-planning.



J. G. Zevely E. P. Wohl

All new appointments are effective Jan. 15.

Davis will be succeeded as chief engineer at Fort Worth by Robert H. Widmer, formerly assistant engineer for technical design.

Esenwein joined Convair in August, 1950, spent a brief time at San Diego and in September became assistant division manager at Fort Worth. He succeeded Ray O. Ryan in December of that year. He was made a Convair vice president in June, 1953. A graduate of Yale, Esenwein served 1942-1946 in the Air Materiel Command as a lieutenant colonel and from 1946 to 1949 as executive vice president of Aviation Maintenance Corp. of Van Nuys, Calif. He was general manager of Piper Aircraft before joining Convair.

Davis joined Convair at Vultee Field in 1940 as a test pilot. He came to San Diego in 1947 as chief design engineer and was closely identified with development of the XF-92A delta wing which paved the way for the F-102 and F-106. He was assistant to the vice president-engineering when transferred to Fort Worth in 1952.

Zevely joined Convair in July, 1949. Previously he had been in private law practice, had served as counsel for RFC and had been an assistant vice president of American Air Lines. His first position with Convair was as manager of contracts for the SD Division.

A World War II Navy officer, Wohl came to Convair in July, 1952 from the staff of the Secretary of Defense. His first position was as assistant to the president and in September of 1957 was named director of planning for Convair.

of about 500 . . . In the second half of the year we will begin on-site work at Omaha toward the activation of Atlas facilities at Offutt AFB. Also, by that time, we will be making plans for the move into Fairchild AFB at Spokane . . ."

Naish

Naish had this to say further concerning expectations for 1959: "Convair will spend about \$300 million for materials, subcontracts, services and wages in the San Diego area during the year . . . Monthly payrolls for the two divisions based at San Diego will average nearly \$20 million. The average for Astronautics will be about \$6 million a month and \$14 million for San Diego Division.

"In addition, Convair will spend nearly \$53 million in the San Diego area with vendors and subcontractors. SD Division expenditures will be about \$42 million, an increase of \$10 million from 1958, and the Astronautics Division's will total nearly \$11 million, an increase of about \$1 million.

Coggan

Coggan continued: "While major emphasis during 1959 will be on production of the 880 and the F-106 at San Diego Division, we are continuing studies and developments of still newer, more advanced air and space vehicles and of newer, faster, better, and more economical methods of production.

"Advanced engineering studies are progressing in the field of anti-missile missiles. Studies also are continuing on atomic-powered aircraft. A recent contract calls for studies on a hydro ski landing system for large flying boats.

"Flight testing of an experimental ballistics supply missile, the Lobber, is far advanced.

"A recent Air Force multi-million dollar contract for a data handling system projects the division into computer system design and manufacture . . . Current research programs that will continue in 1959 include formability of new alloys of titanium, application of numerical control machines to fields other than machining, high velocity forming of metals, use of dynamic etching to produce parts from new alloys . . ."

Dempsey

Dempsey had this to say further: "Astronautics at San Diego will be concerned with continuing production of the Atlas and with classified space projects. We are activating the product support center at Plants 1 and 2 of the San Diego Division. The center will furnish mobile maintenance teams to work with SAC officers at Atlas bases and training facilities.

"This has been a rewarding year for us at Astronautics. There is much work to be done in 1959, but I am confident that the people in our organization who successfully put the Atlas in orbit in 1958 will meet whatever new challenges are presented in 1959 with equal success."

Club to Offer Scholarships

The twelfth annual Convair SD Management Club scholarship program for Convair sons and daughters gets under way this month.

Two \$1000 scholarships will be given, one each to the winning boy and girl. They will be divided into four separate payments, \$250 for each college year.

This year, in addition to the top awards, the two boy and two girl runners-up each will receive a \$100 U. S. Savings Bond, said Tracy Brooks, chairman of the scholarship committee.

Application forms will be out to all city, county, and parochial high schools by the middle of January. They also may be obtained from Brooks, ext. 560, Plant 1.

Clare to Head New Support Dept. at Astro

Creation of a new support service department within the Astronautics product support department has been announced by E. A. Reynolds, manager of product support.

Heading the new department (320) is E. T. Clare as support service manager.

Reporting directly to Clare are:

R. F. Nelson, chief of support engineering (Dept. 321); G. R. Spitzer, chief of support publications (Dept. 322); W. V. Gillette, chief of support logistics (Dept. 325); and H. C. Courington, chief of support documentation (Dept. 327). The last three are new appointments which became effective Monday (Jan. 5) along with Clare's promotion.

In making the appointments, Reynolds indicated the new department would enable a streamlining of specific functions to provide better service to the customer, as well as to internal groups.

Clare joins product support from engineering where he has served as a senior project engineer since June, 1957. He first joined Convair SD in May, 1952 as a design specialist, working up to the post of assistant chief electronics engineer before transferring to Astro. He is a native of Brooklyn and holds a bachelor of electrical engineering from Polytechnic Institute of Brooklyn and an M.S. degree in engineering from the University of California.

Spitzer hails from Columbus, Ohio. He joined Convair at Fort Worth in 1949 as a service engineer. He held several different service engineering supervisory posts there and moved to Astronautics in 1957 as a service publications supervisor. He has been support publications general supervisor.

Gillette is a native Californian who has had wide experience in aircraft and airline operations. He joined Convair FW in 1949 as a contract liaison man and worked in various contract, material and spares posts until moving to Convair Astro in 1957. He has served as chief of supply depot center.

Courington comes from Jacksonville, Ala. He worked for various business and military firms before joining Convair SD in 1950 in a tooling job. He moved to industrial engineering one year later and to Astro in June of 1958. He has served as data control supervisor.

As a result of the transfer of E. T. Clare to product support department, two new appointments have been announced in engineering by Mortimer Rosenbaum, chief engineer.

S. L. Ackerman becomes a senior project engineer replacing Clare in charge of airborne systems and Azusa office. D. F. Folland assumes Ackerman's former title of senior electronics group engineer in charge of trajectory measurement and radiation control.

Ackerman is a native of New York City with an extensive background with civilian and military firms dealing in electronics matters. He came to Convair Astronautics in 1956 after holding several important service and civilian positions at the Air Force Missile Test Center.

Folland hails from Salt Lake City and holds a B.A. in physics from the University of Utah and an M.S. in electrical engineering from Cal Tech. He has been with Convair since 1952 and has devoted most of his time to the Atlas project.

Convairiety

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations. General Offices, San Diego, Calif., Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

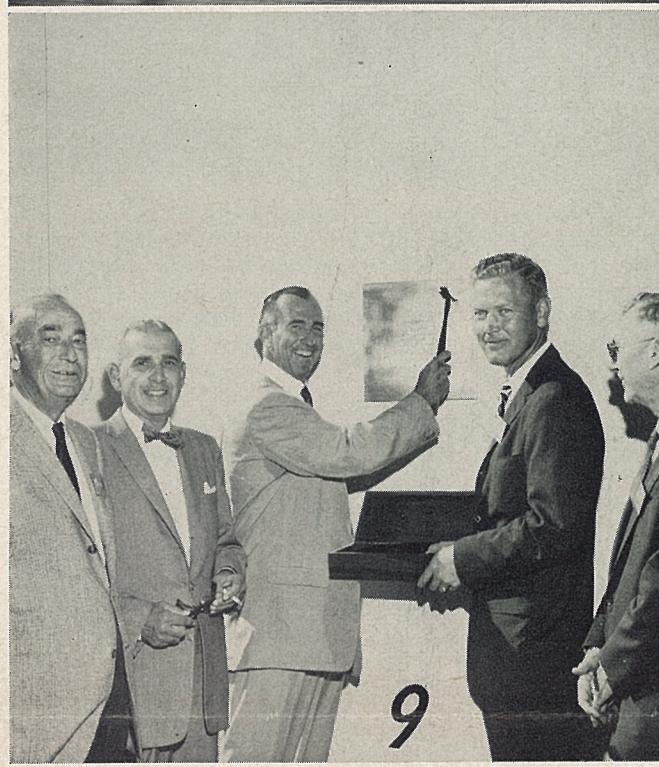
SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Gracey Fath, Helen Pemberton, Fred Bettenger.

Astronautics Editorial Offices, Bldg. 2, new plant, ext. 1154. Staff: Bryan Weckersheimer, news editor.

FW Editorial Offices, Col. 69C, mezz., ext. 2961. Mailing address: Convairiety, Convair, Fort Worth, Texas. Telephone PErsing 8-7311. Staff: Bob Vollmer, news editor; Bobbie Sue Marr, Horace A. Baker Jr.

Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Offices, Room 31, Bldg. 301B, Palmdale, ext. 337. Staff: Betty Lou Nash.



NEWS HIGHLIGHTS OF 1958

No. 1—Top personnel news of year was succession of J. V. Naish, right, to presidency of Convair, succeeding Gen. Joseph T. McNarney.

No. 2—Atlas missile was publicly displayed for first time during 1958. It is shown here alongside B-57 during stop at Fort Worth plant.

No. 3—Pomona Division was honored during 1958 for outstanding service to Navy. Shown during ceremony, left to right: J. V. Naish, Convair president; Rear Adm. T. A. Ahron, assistant chief, Bureau of Ordnance; Charles F. Horne, Pomona Division manager; Capt. Robert B. Heilig, USN, NIO at Pomona.

No. 4—Armed Forces Day found Convair airplanes on display at many points. Shown at Washington with F-106, from left: B. F. Coggan, SD Division manager; R. L. Johnson, chief engineering test pilot; Lt. Gen. W. H. Turner, USAF; August C. Esenwein, FW Division manager; T. G. Lanphier Jr., Convair vice president.

No. 5—First F-106B, two-place version, made its first flight in April, 1958.

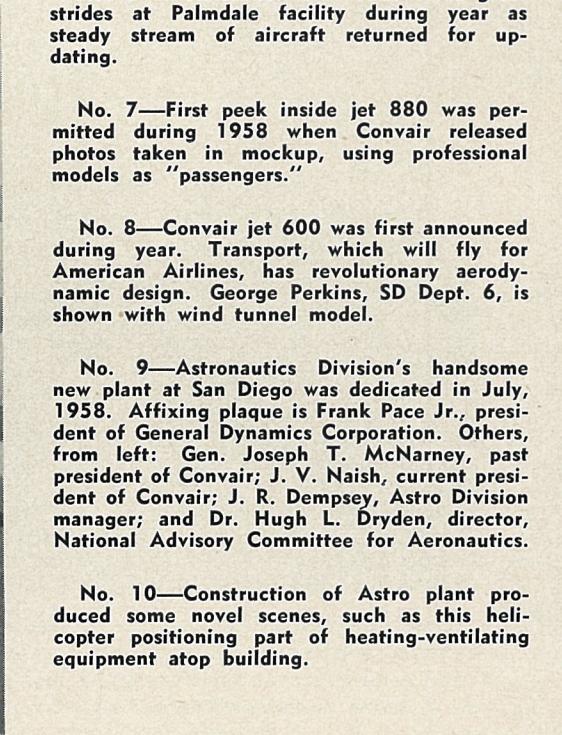
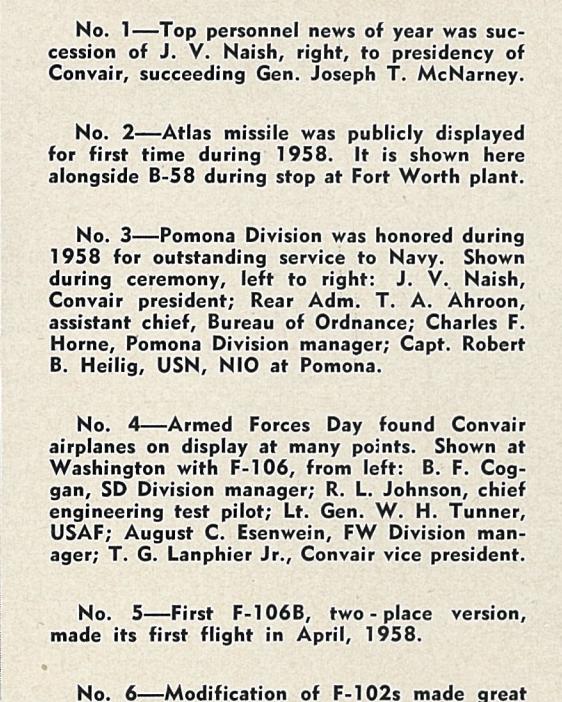
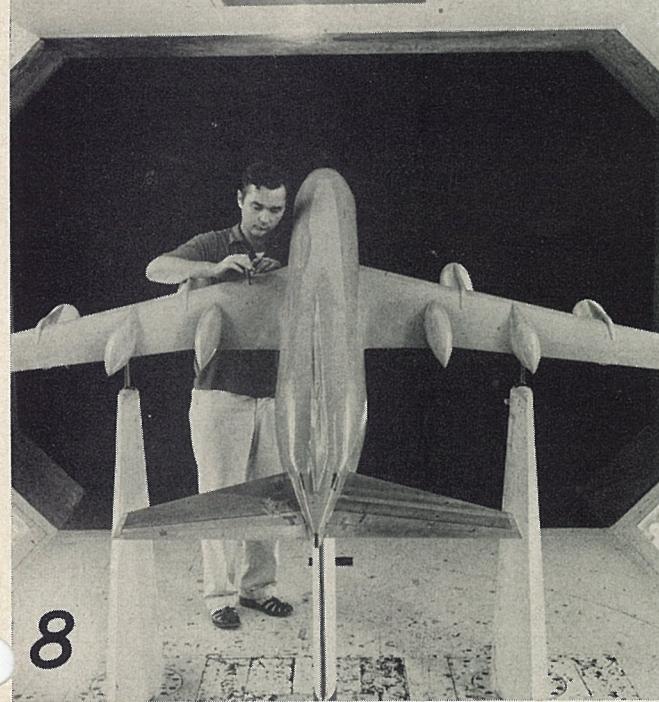
No. 6—Modification of F-102s made great strides at Palmdale facility during year as steady stream of aircraft returned for updating.

No. 7—First peek inside jet 880 was permitted during 1958 when Convair released photos taken in mockup, using professional models as "passengers."

No. 8—Convair jet 600 was first announced during year. Transport, which will fly for American Airlines, has revolutionary aerodynamic design. George Perkins, SD Dept. 6, is shown with wind tunnel model.

No. 9—Astronautics Division's handsome new plant at San Diego was dedicated in July, 1958. Affixing plaque is Frank Pace Jr., president of General Dynamics Corporation. Others, from left: Gen. Joseph T. McNarney, past president of Convair; J. V. Naish, current president of Convair; J. R. Dempsey, Astro Division manager; and Dr. Hugh L. Dryden, director, National Advisory Committee for Aeronautics.

No. 10—Construction of Astro plant produced some novel scenes, such as this helicopter positioning part of heating-ventilating equipment atop building.





MEMORIES—Typical of large number of retired servicemen in ranks of Astro security guards are B. A. Polen, left, and W. F. Maguire, security captain. They are shown looking over mementoes of cruise they made together aboard USS Valley Forge in 1947-48.

Military Past Marks Majority Of Guard Force at Astronautics

Ever hear of a security guard force with 58 chiefs?

Astronautics has one. And all the "chiefs" work in the immediate San Diego area.

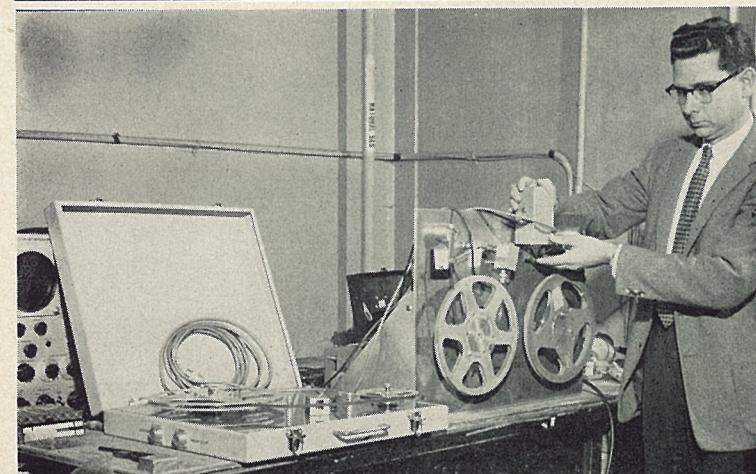
For the record there are only two official guard chiefs. One is Joe Mernik at the main plant. The other is H. W. Gillespie, security chief at the Sycamore Canyon test site.

But working at these two are 56 other chiefs (Navy version). They form the largest contingent of retired servicemen now working for Astro full-time in security. Also in the ranks are: 19 master sergeants; 14 chief warrant officers; nine lieutenants; one captain (Marine); three lieutenant commanders; two majors; one commander; and one lieutenant colonel. And to top it off, there are three retired police sergeants.

Among the ranks is a sprinkling of just about any skill you can name. There are former pilots (conventional, jet and helicopter), band leaders, military police, machinists, cooks, storekeepers, etc.

A check of former ratings shows the group could fill all the key assignments necessary for commissioning a destroyer escort.

Many of these military careers crossed and crossed again. Typical are three men who went around the globe (44,783 miles) with Navy Task Force 38 in 1947-48. All were assigned to the USS Valley Forge. W. F. Maguire, now a security captain, and guards B. A. Polen and B. L. Bolten often swap yarns about such events as a dinner given by the king of Saudi Arabia, and many other highlights.



TWO HATS—Four days a week Kirby Wilson is research engineer at Convair Pomona. Two days each week he instructs physics at Harvey Mudd College. Wilson, whose dual employment has company "blessing," is shown here at work in Convair Pomona physics lab with instrument which measures and records heat over extended periods.

Engineer Leading a Double Life Between Classroom and Lab

Kirby Wilson of Convair Pomona's engineering thermo-mechanics group is currently "wearing two hats."

Mondays, Tuesdays, Thursdays and Fridays he works as a research engineer at Convair Pomona. Wednesdays and Saturdays he teaches elementary physics at Harvey Mudd College in Claremont.

Wilson began his "dual life" several weeks ago, when a member of the college faculty became ill. College authorities asked Convair to supply a temporary replacement. Wilson, who taught similar courses as a graduate assistant while working toward his

master of science degree in physics at the University of Wisconsin, agreed to take the position.

In the meantime, the faculty member for whom Wilson was substituting has resigned because of his health, and Wilson will continue teaching until a permanent replacement can be found, or until the end of the current school year next June.

Wilson, who also received a bachelor of science degree in electrical engineering from the Milwaukee School of Engineering, has been with Convair Pomona since May, 1957. His dual employment is in keeping with Convair's policy of close cooperation with educational institutions.

Little Big Horn

Custer's E Company, 7th U. S. Cavalry Of 1876 Rides Again in Ghost Patrol

Since June 25, 1876, when Gen. George A. Custer's troops were completely wiped out in the Battle of the Little Big Horn, there has never been an E Company, 7th U. S. Cavalry.

Not until three years ago, that is, when five men—including Convair Pomona's Carlos Perryman (Dept. 3)—with mutual interest in all things pertaining to the horse cavalry decided to organize a fraternal organization patterned after Custer's own troop.

Since then the organization, which is legally incorporated under the name "E Company, 7th U. S. Cavalry, Ghost Patrol," has grown to include 45 men. The company—cavalry units were not designated as "troops" until a later date—has its headquarters at Knotts Berry Farm, and meets there the first and third Sundays of every month. It is not connected with the farm in any way, however, Perryman said.

"We are strictly a military organization, and we usually spend about seven hours in dismounted drill at every meeting," Perryman, who holds the rank of corporal, said. "Once a month we go out on the desert near Chatsworth for mounted drill."

The unit wears uniforms and uses equipment from the period of 1870 to 1880. Every article is authentic, and much of the equipment is actual issue equipment from the period.

"All of our leather equipment, except for our boots, is original, and our metal equipment—insignia, belt buckles, etc.—is issue equipment from the period," he said. "All of our drills are those used during the 1870s. This really presented a problem, because practically all of us are veterans. We had to 'unlearn' the modern drills, and learn the older one, and this really led to confusion."

All members of the unit are constantly on the lookout for military relics from the 1870s and 1880s, and as a result have accumulated quite a collection. Some time ago they set up a cavalry museum in their headquarters building at Knotts Berry Farm, which is open to the public each Sunday. The museum collection is valued at over \$10,000.

Perryman recently acquired a complete set of cavalry officer's uniforms, from second lieutenant through colonel, from the period. He is frequently called upon to give talks about his organization, and on these occasions he dresses in the uniform of a lieutenant colonel.

He also has three sabers, a 45-70 Springfield cavalry carbine, model 1873, and a U. S. Army Colt .45 pistol, model 1873-P.

Although he cannot wear his officer's uniforms to the meetings of the company, he has complete field and garrison uniforms of an enlisted man.

The unit has appeared on television shows, and has had offers

from the motion picture studios, though all of the offers have been declined.

Perryman served with the Army for three years during

World War II, including 19 months with the "horse cavalry" at Ft. Riley, Kan. He has been with Convair as a guard for about three months.



GHOST PATROL—Carlos L. Perryman, guard at Convair Pomona who belongs to unique organization patterned after cavalry unit of 1880s, is shown at left in uniform of cavalry lieutenant colonel of that period, showing saber of same period to Robert Balzer (Dept. 31) and Jim Moore (Dept. 6). Balzer is commander of Ontario American Legion Post, while Moore is commander of Upland Post.

Grandson Recalls Triumphs Of Madame Schumann-Heink

"Kings, presidents, and street-sweepers, Madame Schumann-Heink loved all God's children and felt it was her obligation to use her God-given voice for the pleasure of people in all walks of life."

This is the recollection of the world-famous diva treasured by a Convair man, Hans Heink, superintendent of GFE at Astronautics MSTS.

Heink has many memories of the great lady known as the world's greatest coloratura, for Madame Schumann-Heink was his grandmother. It was through her influence that Heink, his mother and his sister were permitted to enter the United States in 1919 as the first Germans to be admitted legally at the end of World War I.

It took a special act of Congress to authorize their entry, an act passed in gratitude for Madame Schumann-Heink's efforts in entertaining U. S. servicemen during the war.

Heink recalls that his grandmother kept in touch with them during the war through the Steinway piano company which had plants in New York and Hamburg, Germany. The company officials relayed personal messages and delivered money which Madame Schumann-Heink

sent to her relatives in Germany by placing a large "order" with the Steinway New York office. Actually, his grandmother never bought pianos; they were always the gifts of admirers, Heink said.

One of the treasured pieces in Heink's home is a Steinway given to Madame Schumann-Heink early in the 1900s for use in her private railroad car. Over the piano hangs a framed wreath of gold leaves, each leaf inscribed with the title of one of her operatic roles. The wreath was presented to her on the stage of the Metropolitan Opera Co. in commemoration of her 50th anniversary as an opera star.

Exhibited atop the piano are a number of other family heirlooms, including a photo of Madame Schumann-Heink, and a miniature polar bear.

The little white bear has a story all of its own, for this was a good-luck piece that Heink's father, a member of the German Imperial Navy, always took with him on sea voyages. The single exception was his last tragic voyage when he had a premonition of his death and left the bear behind for his young son.

Next to the piano stands a traditional German grandfather's clock, a gift from Heink's mother to his father.

Heink was 11 when he left Germany and arrived in California where he often accompanied his grandmother on concert tours. He recalls that the great artist was an ardent champion of democracy and was exceedingly generous with her great wealth and her great voice, using both for the benefit of others until her death in 1936.

One of her well-known characteristics was a tremendous appetite. On one occasion, Heink recalls, she had just been served a steak of tremendous proportions when Enrico Caruso (also known as a great singer with an appetite to match) passed her table. He inquired, "Are you going to eat that steak alone?" And she replied, "Oh no, they are bringing the vegetables."

Heink, who transferred to Astronautics MSTS a year ago, joined Convair San Diego in 1941 as a dispatcher. He left the company in 1945 but rejoined two years later. Transplanted from La Jolla, Mr. and Mrs. Heink and their two children now reside in Lancaster.

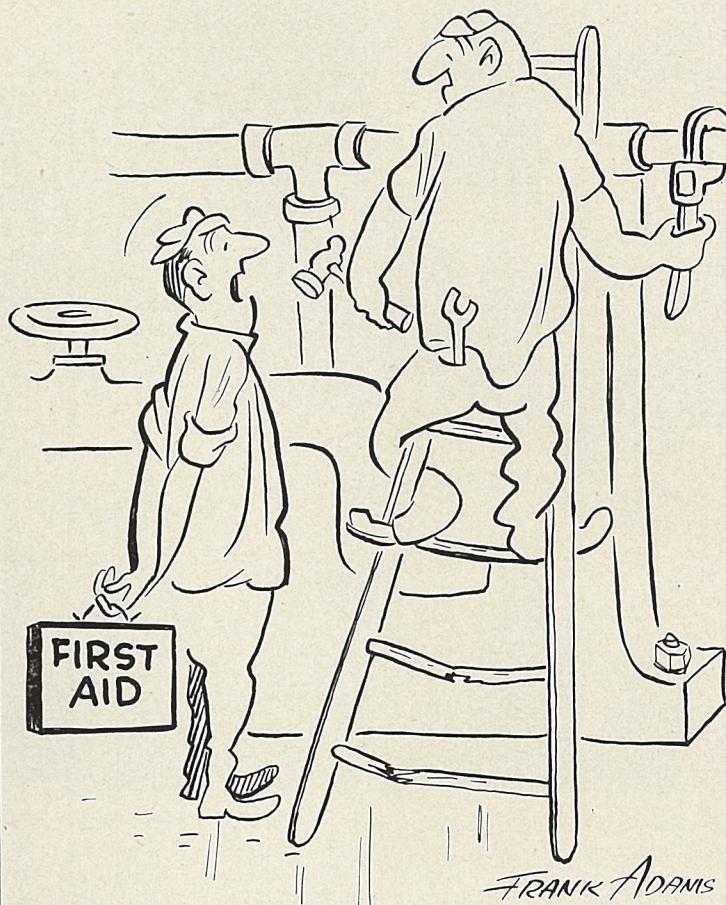


SINGER'S GRANDSON—Hans Heink (MSTS, Dept. 575) seated at piano left him by his grandmother, Madame Schumann-Heink. On top of piano is miniature polar bear left by his father, photo of Madame Schumann-Heink, and above piano gold wreath presented to her at Metropolitan Opera.

Rules to Guard Safety Of Employees Listed

(Following are general rules laid down by Convair for the protection of its working forces. Although handed to all new employees during their indoctrination, a "refresher course" for others may be of value.)

1. Do not turn on, use, repair or operate any machine, tool, vehicle, crane or electricity, gas, steam, air, acid or caustic or other dangerous material or equipment unless you have specific authorization to do so by your supervisor.
2. Safety guards and devices are provided by the Company for your use and protection. Removal or non-use is prohibited.
3. Danger and Warning signs are posted for your protection. Observe and obey them at all times.
4. Protective clothing such as hard hats, rubber and asbestos gloves, rubber boots and respirators are furnished by the Company and must be worn on jobs requiring this type of protection.
5. Safety glasses or goggles must be worn at all times when grinding, sawing, drilling or chipping. Face shields must be worn at all times when pouring hot metal, handling acids or caustics. In addition, in doing any other work where eye or face protection is necessary, the proper equipment shall be worn.
6. Report all plant injuries, regardless of severity, to the nearest First Aid Station immediately. Never attempt self-treatment. A slight injury may become infected if not properly treated.
7. Horse play, scuffling, running, and practical jokes in the plant are prohibited.
8. Before leaving a machine be sure the power is off. If authorized to clean or repair machinery or equipment, before starting the work be sure to lock the switch in "OFF" position and place "Men Working" sign on switch. Do not remove your lock until you have completed the job.
9. Use compressed air only on work requiring its use. Do not clean your clothing, benches, floors or release air close to the body of yourself or fellow worker.
10. When using mechanical means for lifting or hoisting, never lift more than the capacity of the crane or hoist. Use proper sling and stand clear of the load. If you are not sure, stop and ask your supervisor.
11. Do not pile or leave tools or loose materials on ladders, scaffolding, or stairs.
12. The use of makeshift equipment is prohibited. Be sure you have the proper tool, fixture, ladder, platform or other equipment before starting a job. When working on high elevations from which you might fall, safety belts shall be worn.
13. High speed grinders shall only be used when authorized by your supervisor. Be sure the correct wheel and guard is provided for the job.
14. Certain solvents have been purchased to do specific jobs. Contact your supervisor for the correct one to be used and be sure that



"I was sent to help you in any way I could . . ."

adequate ventilation is provided. Flammable liquids shall be kept in safety cans and should not be used to clean benches, floors, etc., or to clean hands or other parts of the body.

15. Loose or torn clothing, sleeves, tails, ties, lapels, cuffs, wrist-watches, rings or other jewelry shall not be worn around moving machinery.
16. Hand tools are to be used only for the purpose for which they are designed. Return defective or unsafe equipment to your supervisor.
17. The wearing of open toe, open heel, or high heel shoes in the shop is not permitted. Sandals, sneakers, huaraches, canvas-top shoes, or similar footgear are NOT permitted in the factory area.
18. Women are to wear approved hair covering when working around revolving machinery or equipment.
19. Your supervisor will inform you of additional safety rules necessary to safely perform your job. If in doubt, STOP!—and ask your supervisor.

F-106A Flies To Alaska for Cold Testing

An F-106A has flown to the Far North for a series of cold weather tests.

The plane arrived at Eielson AFB, near Fairbanks, Alaska, two weeks ago (Dec. 22) for Phase V of the test program during which the craft and ground support equipment will be put through their paces in severe cold weather conditions—at temperatures to 40 degrees below zero.

Capt. T. R. Bogan, pilot, was at the controls when the F-106A left Wright-Patterson AFB, Dayton, Ohio, on Dec. 21 for the flight north.

On hand to greet the plane at Eielson were Major J. C. Gordon, task force commander; and two Convair SD field representatives, W. D. Nowell, in charge of ground support equipment; and E. P. Griesell, spare parts.

Dave Johnson, field service engineer, who, as Convair's technical assistant, has been with the plane since it began the test series, accompanied the Alaskan flight aboard a C-97.

Following climatic hangar tests at Eglin AFB, Fla., this fall the F-106A was in Palmdale for aircraft and radar modification.

Cold weather testing at Eielson is expected to continue for at least two months.

Atlas Seen Overhead In South Africa City

K. J. Bossart, assistant to Convair vice president-engineering and a key man in early development of Atlas missile, received this message shortly before Christmas from his sister, Dora Scott, in Bloemfontein, Union of South Africa:

"Congratulations splendid achievement. Saw Atlas right over our heads . . ."

NEWS FROM OTHER DYNAMICS DIVISIONS

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair Ltd. of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., airframe and missile builders.

Electric Boat of Groton, Conn., submarine builders.

Stromberg-Carlson, of Rochester, N.Y., telecommunications, electronic equipment.

Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.

General Atomic of San Diego, Calif., nuclear research, development, production.

Electro Dynamic of Bayonne, N.J., electric motors, generators.

Electric Boat-Built Submarine Skate Joins U. S. Fleet, Six Months Ahead of Schedule

GROTON—Six months ahead of schedule, the Navy's third nuclear submarine, Skate, joined the fleet last month.

She was commissioned Dec. 23 at the shipyard of General Dynamics' Electric Boat Division where she was built. Skate is the third atomic submarine. Seawolf was commissioned in March, 1958, and Nautilus was commissioned in 1954.

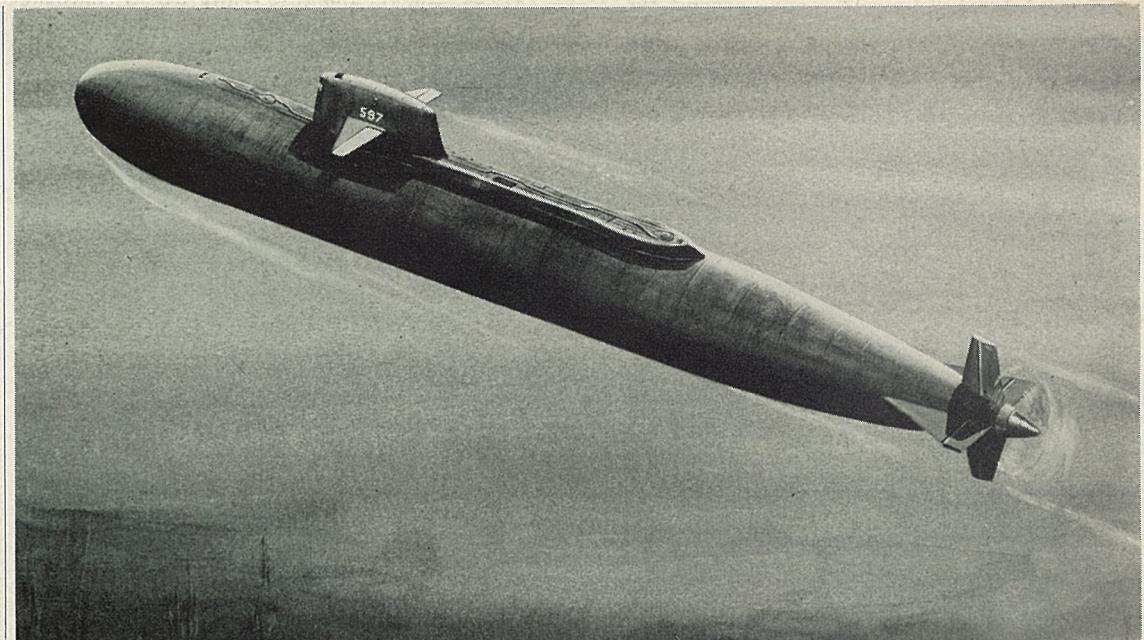
The Navy now has authorized a total of 19 nuclear submarines in its program.

Skate is the first of four nuclear subs designed for assem-

bly-line production. She is 267 feet long and displaces 2,190 tons. Under command of Cdr. James F. Calvert, USN, she began builder's trials Oct. 27 and performance was termed "outstanding" by the Navy.

At commissioning ceremonies, Carleton Shugg, Electric Boat general manager, delivered the vessel and Rear Adm. M. E. Miles, USN, Third Naval District commandant, commissioned her.

Skate was originally scheduled for completion in mid-1959.



SUB HUNTER—Artist's conception of Tullibee, nuclear submarine under construction at Electric Boat, was released by General Dynamics last month. Smallest atomic sub yet built, Tullibee is 260 feet long, displaces 2,175 tons, is designed to seek and destroy enemy submarines.

First Flights Near For Prototypes Of Canadair's New 540 Transports

A few picked production men from Convair SD are likely to go to Montreal this spring to assist

Canadair in work on the Canadair turboprop version of the Convair 440.

The new airplane is known as the 540 and CL-66.

Two prototypes (440s converted to turboprop Eland 6 engines) were nearing completion last month with first flight expected soon.

The Canadair 540 will have a gross weight of about 53,200 pounds and a cruising speed of 325 mph.

Ash Bishop, SD assistant foreman in tooling, returned from Montreal in December after four months assisting in the shift of tooling from SD. Jerry Dugan, SD assistant project engineer, will remain at Canadair until May.

Bishop reported that manufacture is progressing well on the 540 with fuselage belt frames being assembled and first noses

taking shape.

"The tooling that we shipped to Montreal has been worked over as necessary and really looks 'beautiful,'" Bishop said.

"Canadair people take great pride in their workmanship and, believe me, it shows in quality. They are setting a very high standard for Canadian industry."

Bishop said there is no such thing as a "stranger" at Canadair. The people are most friendly and hospitable. Though virtually all with whom he had business spoke English, there is a high percentage of Canadair folk who speak mainly French. It is the language most heard in the shop. Blueprints are in English but most bulletins, etc., are in both languages.

"Their plants and equipment are kept in top condition and housekeeping is excellent," Bishop continued.



SNOWBALLING—SD men at Canadair are, from left, Jerry Dugan, assistant project engineer, John Ready, project engineer, Ash Bishop, tooling assistant foreman. They have been assisting in Canadair's 540 project. During last few weeks of Bishop's stay mercury remained around zero!



YEAR END ANTICS—Annual holiday season brought usual round of parties, decorations, etc., at Astronautics as well as occasion to help less fortunate. Upper left is tree decorating time in Florida with Pat Smith and Margaret Phillips doing honors. In background is Atlas missile later put into orbit. Center are J. R. Dempseys

and W. H. Pattersons at CRA Christmas dance, while dancers at same affair are shown at right. Lower photographs were made at party for 117 needy youngsters staged by Astro. Group standing are Prophet Co. employees who prepared food. Other shots show kids enjoying entertainment and chat with Santa.

Eight From Astronautics Qualify As President Award Nominees

Eight Convair Astronautics men have qualified as candidates for the 1958 President's Award, highest honor paid annually for cost reduction activities.

The men, with department numbers in parentheses, are: E. J. Barnett (290); T. R. Barthel (401); R. R. Dowers (211); R. L. Eastberg (211); L. G. Egerer Jr. (193); O. H. Johnson (220); F. L. Shuter (341) and C. D. Stephens (772).

Log Book Entries Promotions

ASTRONAUTICS

Promotions and transfers to or within supervision effective Dec. 22, 1958.

Dept. 181-4, Methods & Layout: To factory methods asst. supervisor, J. R. Couchois.

Dept. 193-0, Industrial Accounting: To accounting supervisor, J. A. Sanderson.

Dept. 220, Manufacturing Control: To manufacturing control general foreman, A. Amison Jr. To manufacturing control foreman, W. E. Hoffman, D. J. MacDonald. To manufacturing control asst. foreman, D. C. Casteel, M. K. Debont, D. E. Miner, C. M. Price, W. J. Robinson, R. N. Ryan.

Dept. 280-3, Inspection: To test data evaluation supervisor, A. B. Yanke. To inspection asst. supervisor Gr. V, D. D. Lawyer.

Dept. 290-2, Manufacturing Development: To manufacturing development asst. supervisor, L. B. Ziffrin.

Dept. 300-0, Product Support Administration: To foreman Gr. V, S. Special.

Dept. 321-3, Support Engineering: To service engr. asst. supervisor, H. L. Allen.

Dept. 344-1, Support Operations: To foreman Gr. V, R. W. Dickenson, E. H. Southard. To asst. foreman Gr. V, W. E. Greenway, J. J. Martinez, C. C. Scott, E. H. Vossen.

Dept. 573-3, Convair Operations-Sycamore: To asst. foreman Gr. V, R. R. Rote.

Dept. 595-7, Development Function: To asst. group engineer, C. R. Blayzor, E. Koester.

Dept. 773-0, Missile Checkout & Acceptance: To foreman Gr. V, T. A. Hutchinson. To asst. foreman Gr. V, F. Rieken Jr., W. G. Schultz.

AFMTC

Transfer to supervision effective Dec. 22, 1958.

Dept. 571-3, AFMTC Model 7: To asst. foreman Gr. V, R. D. Strickland.

VANDEBERG AFB

Transfers to supervision effective Dec. 22, 1958.

Dept. 576, Convair Operations: To office services asst. supervisor, G. A. Klein. To asst. foreman Gr. V, T. G. Bons, N. D. McMahon, P. J. Michels.

Service Emblems

ASTRONAUTICS

Service emblems due during the period Jan. 1 through Jan. 15:

Fifteen-year: Dept. 193-0, J. C. McFall; Dept. 220-1, R. T. Andrews; Dept. 322-9, A. C. Pfennighausen; Dept. 758-0, Dorothy Fischer.

Ten-year: Dept. 120-5, W. W. Gault; Dept. 220-1, Laura S. Hammer; Dept. 322-3, J. H. Van Nice; Dept. 401-0, J. C. Hopkins; Dept. 451-0, M. S. Bock Jr.; Dept. 758-0, A. W. Crosthwaite.

Births

ASTRONAUTICS

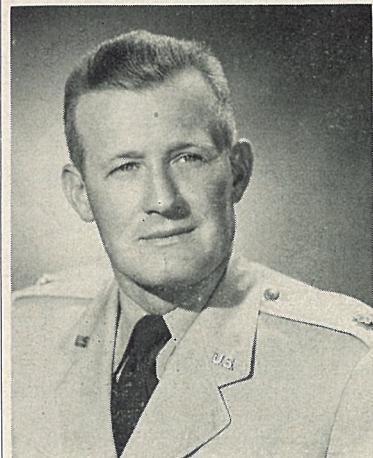
MORGAN—Daughter, Marian Elizabeth, 8 lbs., 8 oz., born Dec. 22 to Mr. and Mrs. J. B. Morgan, Dept. 194.

RECTOR—Son, David Allan, 4 lbs., 9 oz., born Dec. 19 to Mr. and Mrs. W. F. Rector, Dept. 595.

Deaths

ASTRONAUTICS

RUTH—Lottie Mae, Dept. 772, died Dec. 23. Survived by son, Ralph L. Van Allen; daughter, Mrs. Fern Ebel; one brother and two sisters.



PLANT REP.—Lt. Col. H. E. Moose, USAF, new assistant AF plant representative assigned to Astronautics Division, is currently on duty. He relieved Maj. D. J. Yockey.

Riding Club Members To Erect Bleachers

Astronautics Riding Club members will tackle the job of erecting bleachers for the new riding ring in the CRA recreational area this month.

Initial work parties will start the job this weekend (Jan. 10-11), according to F. W. Augustine, CRA representative. Interested persons are invited to come out either day.

Next regular club meeting will be at 7:30 p.m. Jan. 13 at the Astro cafeteria.

Bossart Will Speak On Atlas Satellite During Jan. 15 Meet

K. J. Bossert, assistant to Convair's vice president-engineering, will be principal speaker at a Jan. 15 meeting planned by the West Coast Electronics Manufacturers' Association.

It is set for the Redwood Room, Town and Country Motel. Social hour begins at 5:30 with dinner at 7:30.

Bossart, long considered as "father of the Atlas" for his contributions, will speak on the "Atlas in Orbit." He is expected to present a movie showing the Atlas launching.

The meeting is open to all Convair men and women, according to E. T. Clare, Astro's support service manager. Clare is secretary-treasurer of the group. However, dinner reservations must be made through Clare (ext. 1566) by Jan. 12.

Safety Engineers Attend Conference

Convair Astronautics' full force of safety engineers, 10 strong, attended a special two-day session Dec. 15-16 at the Astro plant. J. W. Garrison, Astro's chief safety engineer, presided.

The meeting, one of two held by the group annually, consisted of special reports dealing with safety problems, findings of various members, plus general discussion of safety problems related to various locations.

M. V. Wisdom, Astro's manager of industrial relations, and I. L. Beauchamp, Convair SD industrial hygienist, took part.

Attending were: A. W. Billitti and M. G. Rustin of Missile Static Test Site; B. F. Ellzey and A. K. Quimbey of Air Force Missile Test Center; W. D. Morgan of Vandenberg AFB; R. H. Moore of Sycamore Canyon Test Site; Garrison, J. H. Cooper, H. E. Wagner and A. W. Wright of the Astro plant.

Is It News?
Call Convairity

Educational Services Center For Astro Holds Open House

Convair Astronautics held "open house" late last month for its new Educational Services Center.

The Center (Bldg. 17), located south of Bldg. 4, is modern and well-equipped. It was designed and built to serve Astro's expanding need for internal education.

J. R. Dempsey, Astro manager, and members of his staff paid a special visit to the Center Dec. 19. Later that day (3 to 5:30 p.m.), invited guests were conducted on guided tours.

Hosts were M. V. Wisdom, Astro's manager of industrial relations, R. F. Smith, chief of educational services, and members of the latter's staff.

The event marked the first official use of the designation educational services section. Previously, it was known as the training section.

The Center consists of 6,000 square feet of space broken into three conference-type and five lecture-type classrooms, plus an electronics laboratory and a mechanical laboratory. In addition, there is a combination office-library for use by instructors, and rest room facilities.

Each classroom is equipped with a blackboard, projection screen, movie projector and slide projector. For general use there are tape recorders, additional types of special slide projection equipment and various mobile and stationary educational aids.

The electronics and mechanical laboratories contain various types of modern oscilloscopes, check-out and control panels, testing equipment and ample work benches and hand tools to perform assignments. To supplement this equipment, which duplicates many items found in the test labs and factory, Astro has on order

many new training devices.

Since activating its new plant early this year, Astronautics has averaged educational class enrollments of about 900 students per month. These students have devoted an average of 10,200 manhours monthly to classroom work.

In addition to a regular staff of full-time instructors, Astro constantly utilizes the services of part-time teachers from engineering, factory and general administrative functions as well as specialized representatives of associate contractors.

Spearfishers Considered For Team Berths

Winner of a spearfishing meeting set for 9 a.m. to noon Sunday (Jan. 11) at La Jolla Cove by the Astronautics Divers will likely garner more honors than just the daily prize.

For instance, two berths are still open on the Astro team that will compete in the annual Winter AAU Dive set for Feb. 8. Under the selection rules the winner and runner-up of Sunday's affair are almost sure to be included.

And there are only three months remaining in the contest to name the "Diver of the Year." Points gathered Sunday would greatly help individual totals. At present Bob Nicholas is in the lead, followed by Jorge Zorrilla, Herb Boynton and Keith Kaonis.

Next regular meeting will be at 7:30 p.m. Jan. 27 in the Astro executive dining room. An underwater film will be shown.



JUST VISITING—Top members of supervision at Astronautics, including Manager J. R. Dempsey, standing at right in background, visited class in session during open house of new Educational Services Center. R. F. Smith, chief of educational services, is standing at left rear. Instructor in missile familiarization course is W. A. Kuhtz.



SOME SUBJECT—Shirley Kuhn, one of Astro's fairest, has agreed to pose for members of Astrolens at special model shoot 7:30 p.m. Jan. 12 at executive dining room. Session is open to all adult CRA members and spouses. Les Blakey sneaked an earlier appointment with Shirley and produced this picture for Convairity.

CRA Sports & Recreation Convairity

Astro Ski Bums Go Far and Wide Over New Year's Seeking Snow

A weary but enthusiastic group of about 30 Astronautics skiers was expected back at work last Monday following one of the most extensive quests for winter sports ever undertaken over a long weekend.

If all went well over the New Year's holiday period, the Astro skiers well earned their self-applied name of "Astro Ski Bums."

Departing San Diego after work New Year's Eve, the group traveled to Bishop for a short celebration, then north to Mammoth for the first skiing of the year. At the close of the day, the travelers journeyed to Carson

Bridge Fans Make New Meeting Dates

A change in meeting dates for the Astro Bridge Club during January has been announced.

Regular sessions will be held on Jan. 15 and 29 instead of Jan. 8 and 22 as previously announced. The club meets at the Barcelona Bridge Club, 4th and Juniper.

City, Nevada, for the night, then ventured onward to Squaw Valley for more skiing. Friday night was spent in Truckee. Saturday found the group at Donner Pass. They returned Sunday.

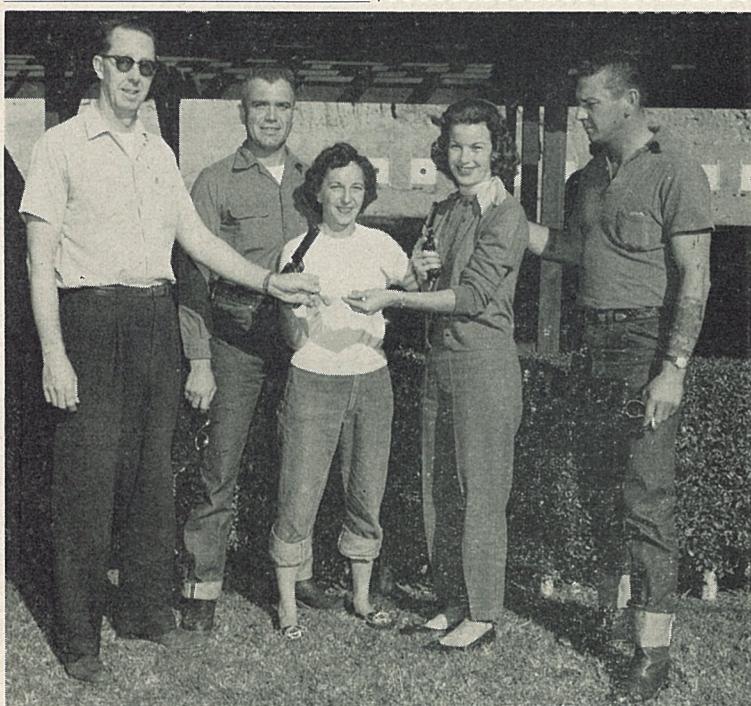
Subsequent jaunts to other ski areas are being planned for January and February. Details will be available later.

All-Girl Cage Team Wears Astro Colors

An all-girl cage team, wearing the colors of Convair Astronautics CRA, has been holding periodic workouts during recent weeks in anticipation of entering regular league play shortly.

At present only about 10 girls are taking part. There is an urgent need for additional players, according to Leno McDonald, coach.

Those interested are asked to contact Ray Mendoza, ext. 1111, for further details.



FEMININE ELEMENT—Astro Pistol Club went "co-ed" last month when two girls turned out for competition for first time. Bill Geopfarth, CRA commissioner, left, presents membership cards to Janet Schleibaum and Margie Bacon with their husbands, Hank and Bill, as witnesses.

Memory Expert To Teach Class If 40 Sign Up

Ever thought of studying under a professional mnemonist?

You can, beginning Jan. 28 at Convair Astronautics, thanks to arrangements made by CRA.

In case you didn't know, a mnemonist (Greek) is a memory expert. In this case Donald Robinson is the expert, a man who has appeared once before CRA in conjunction with a Women's Council show. Since that time many have asked CRA to arrange for him to teach his subject over a longer period.

Robinson's eight-week (two-and-one-half hours weekly) course will be taught each Wednesday at 7 at the Astro executive dining room. It will include suggestions and instructions in how to recall almost anything. Robinson claims those completing the course will be able to memorize every article, advertisement and cartoon in a 110-page magazine by the page number in only two minutes per page. Or meet 20 persons at one time and recall at least 90 percent of their names.

With CRA sharing a portion of the bill, the charge per student will be only \$10 for the full course. However, at least 40 students must sign up before the course can be arranged.

Those interested are asked to contact Joyce, ext. 1111.

Charm School Class Planned

Astronautics CRA has made arrangements for a special John Robert Powers Charm School course to be offered at greatly reduced rates to all Astro women, wives and daughters.

The 30-week session featuring figure control, make-up, hair styling, wardrobe planning, voice control and diction, social graces and etiquette and personality development will begin Feb. 10. Classes will be one hour long and held once per week, probably at the Astro cafeteria.

Through arrangements made by CRA, the \$255 course will cost students only \$55.

Applications for enrollment are being taken at all Astro facilities. Contact CRA, Bldg. 8, at the Astro plant; Rosemarie Scanlan, ext. 1920, Plant 1; Doris Wells, ext. 111, Mallen Bldg., or industrial relations at Sycamore Canyon.

Russ Oliver Heads Astro Pistol Team

Russ Oliver (Dept. 130) heads a five-man Convair Astronautics pistol team following a three-month competition with three types of pistols.

Oliver had a score of 835 of a possible 900 points. Others include: Ken Bunker (Dept. 131), 805; Bill Geopfarth (Dept. 772), 786; Bob Raymond (Dept. 130), 738; and Ed Maiers (Dept. 573-3), 680.

Winners of the last .22 shoot were: master class, Dave Reichenbacher (Dept. 130), 287; expert class, Bob Raymond, 280; sharpshooter class, Ed Maiers, 269; and marksman class, Bob Slater, a Convair son, 237.

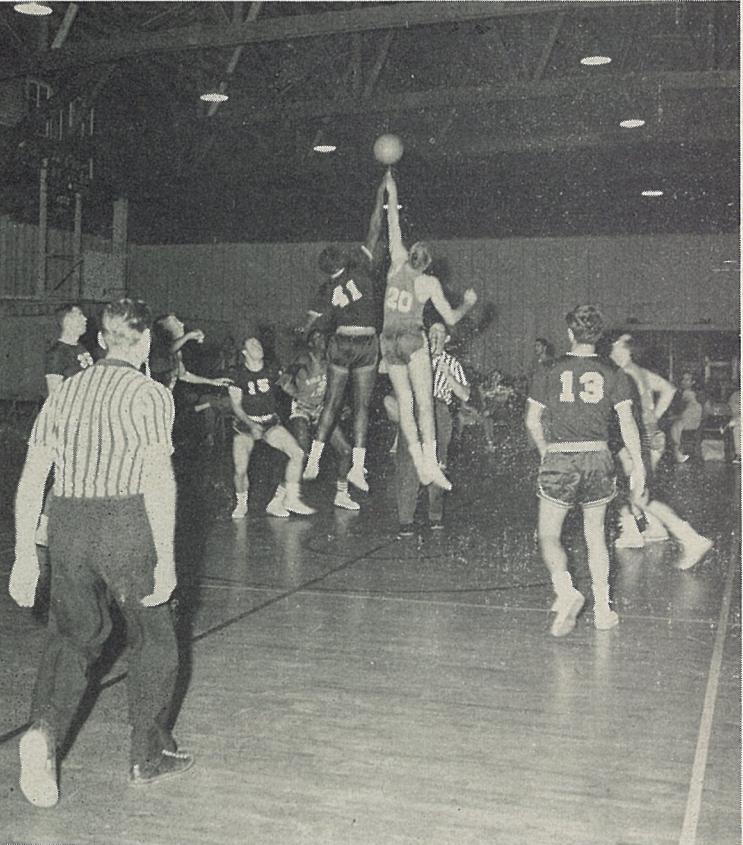
Midget Racing for Children Predicted

The possibility of sponsorship of both "quarter midget" racing for children and "Formula K" racing for adults is being considered by Astronautics CRA.

Anyone interested in taking part in either activity is asked to contact Bunny at ext. 1111.

HOOPSTERS SOUGHT FOR NEW TEAM

Astronautics is still seeking experienced players to man a possible second entry in San Diego cage action beginning shortly after the first of the year. Players are asked to contact CRA, ext. 1111, for information on workouts, etc.



RUNNER-UP—Astro's entry placed second in pre-season basketball city tournament. John Trader of Astrolens took these photos. In team picture are Willy Pitts, F. E. Scearce, Bill Castry, Percy Gilbert, Jessie Coffee, Rodger Deshong, Paul Loughrey, Bill Sheng, Joe McNamara, Dave Anderson.

Astro Will Send Powerful Cage Team Into City League Action

Convair Astronautics is ready to send into action this month what will likely prove to be its best cage team ever in the San Diego City league, composed of the top amateur squads in this area.

Astro's entry emerged from the annual pre-season tournament just before Christmas in second place after forcing the winning team into a crucial final-game play-off.

Playing two to three games weekly during the tournament, Astro polished off all opponents before running into the Ohio State Life team, composed of some of the best former college performers in the country.

Ohio State Life edged Astro 50-44 in their first meeting. Astro swung back into the loser's bracket in the double elimination tournament and again dominated all opposition to gain a finals spot, again facing Ohio State Life. The Astro team combined smooth teamwork to top the previously unbeaten team by 68-54. This forced a final showdown game for the championship. Ohio State Life roared back to take this game by an 87-64 count.

While the Astro entry features some outstanding talent in its individual members, it is best noted to date for team play.

The usual starting lineup con-

sists of Willy Pitts and Percy Gilbert at forwards, Jessie Coffee at center and Rodger Deshong and Paul Loughrey at guards. They are backed up by such players as F. E. Scearce, Bill Castry, Bill Sheng, Joe McNamara and Dave Anderson.

Ernest "Kirk" Brunton, newly-named coach of the Astro cagers, said this week that emphasis would continue to be placed on team play during the coming season.

He also stated that experienced ball players who can make the team are always welcome. Ray Mendoza, ext. 1111, can supply information.

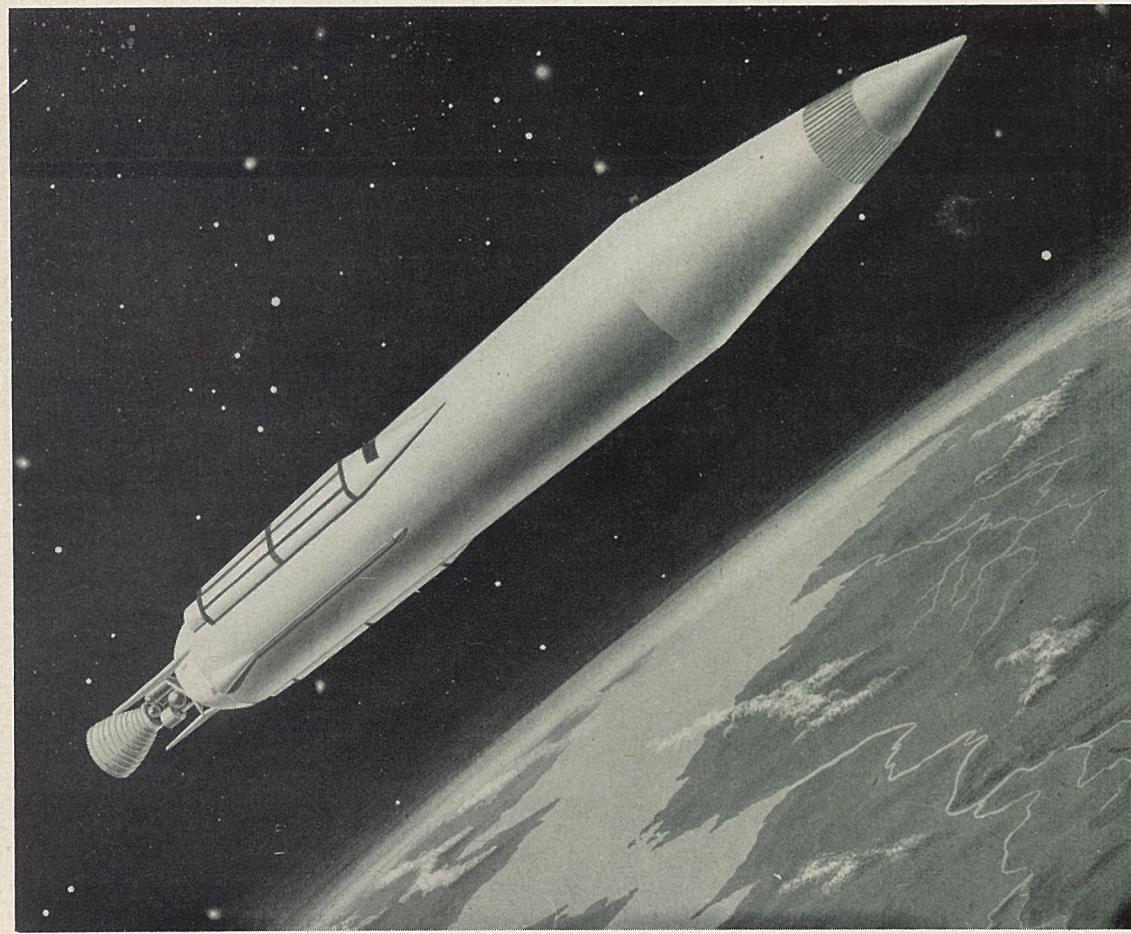
ASTRO CLUB PLANS NOVEL LADIES' NIGHT

Astronautics Management Club will stage a novel "Ladies Night" meeting Jan. 22 at the El Cortez Hotel under the sponsorship of industrial relations department.

In the past wives have normally attended only those meetings designated as strictly social. This meeting has been set up to be both social and educational.

Sharing speaking honors will be J. R. Dempsey, Astro manager, and R. F. Smith, chief of educational services at Astro. Dempsey will talk briefly on Astro's accomplishments during the past year and dwell on future prospects. Smith, a popular after-dinner speaker, will discuss the "Role of the Management Wife." In the latter a novel audience participation will be included.

Entertainment will be provided and the usual prize drawing will be directed at the ladies.



EARTH CIRCLING—Artist John Sentovic of Astronautics product support pictures Atlas in orbit thusly. Still attached to missile is one of three main engines. Two "booster" engines were jettisoned at lower altitude. The 82-foot Atlas is only rocket in western world capable of propelling itself into orbit. From time of firing to orbit was about 4½ minutes.

Feb. 12 Ceremony Marks Retirement of Last B-36

The last B-36 to be built will be the last retired—and is the giant intercontinental Convair-built bomber chosen for enshrinement at Fort Worth's Carter Field.

The last B-36, which is No. 383, was delivered to the Air Force by Convair in public ceremonies Aug. 14, 1954.

Almost five years later—on Feb. 12 of 1959—it will be retired in two other public ceremonies.

At Biggs Air Force Base, El Paso, where it is still in service, the 95th Bomb Wing of Strategic Air Command is planning a special ceremony to commemorate the occasion.

Convair has been invited to participate, and a number of Convair officials will be on hand.

As part of the ceremony, three

AF crew members at Biggs will be presented special awards to recognize that each has flown more than 5,000 hours in B-36s.

Closing the ceremony, the AF crew will take the B-36 on its last flight—a quick 475 nautical-mile hop to Carter Field in Fort Worth.

There the plane will be the center of attraction for its second ceremony of the day, a program arranged by Mayor Tom McCann to accept the B-36 on behalf of the City of Fort Worth.

The Amon G. Carter Foundation has announced a gift of \$5,000 which will be used to build a permanent concrete apron.

The Convair Fort Worth Management Club has agreed to put the plane in like-new condition for display, and to maintain it over the years.

XC-99, Aerial Goliath, Moved To Last Resting Place at Kelly

Kelly Air Force Base people bade farewell to the Convair-built XC-99, world's largest land-based plane, this month when the plane was moved from the base after being donated to the Disabled American Veterans of Texas.

To allow passage through Kelly's perimeter fence, part of the enclosure had to be removed.

The plane was towed some 4,400 feet from its location to its new off-base site on private property west of the north end of the two-mile Kelly runway.

The aerial goliath was designed at Convair San Diego. Its fuse-

lage was built there. Since the wings were roughly the same as the B-36, Convair Fort Worth stepped in and sent wings to San Diego on flat cars.

Flight testing for the mammoth aircraft was also performed at Convair Fort Worth.

The plane was built in 1947 and was delivered to the Air Force in 1949. It completed its final flight in March of 1957.

In its flying time, the '99 logged something like 7,434 hours and carried some 60 million pounds 1,486,000 miles. It broke 21 world records when it hauled 104,190 pounds on one flight.

Hot and Cold

Days Are Short, Nights Are Too, On Board Atlas

What's it like up there aboard the Atlas satellite?

Convairity asked Dr. J. E. Naugle, physicist and senior staff scientist in Convair's scientific research department. Here's his opinion:

Probably the strangest sensation, at first, would be the rapid change from light to dark. That is, about 50 minutes of "day" followed by 50 minutes of "night."

Another would be that of "weightlessness." A man would float like a feather. A slight pressure against any solid object would be sufficient to send him moving in the opposite direction.

Looking down, a satellite rider could make out the earth and probably distinguish between land and water masses, but they would pass quickly. The sun and moon would still appear as small, distant, circular objects.

Over the earth would be a haze, probably dark blue in color. Above the sky would be black. The stars would not twinkle. However, any objects nearby (flying saucers?) would be in sharp focus and would stand out clearly.

Oxygen would be necessary for breathing. The side of the missile nearest the sun would be warm, almost hot. The other would be cold.

And there would likely be few, if any, meteors to dodge. Most meteorites are particles even smaller than dust.



DURING THE SHOT—Scene is inside blockhouse during countdown for 10-B missile that went into orbit. In hard hat, B. G. MacNabb, base manager, chats with C. E. Daniher. Writing is Curtis Johnson, test conductor. At right is Travis Maloy, chief test conductor.

Satellite Secret Known To Only 16 Astro Men; A Triumph For Security

(Continued from Page 1) a deliberate slight but was in the interest of maintaining the superlative degree of security that the government required of us."

Excluded from such knowledge were the crews who performed final pre-launch operations and the blockhouse force that conducted the countdown. Curtis Johnston directed the latter as test conductor. He reported several incidents which made him "very suspicious."

"But I had a job to do and I didn't ask questions," Johnston said.

B. G. MacNabb, Astro's manager at AFMTC, later told of "rehearsings" stories to be told to his men. These were to justify deviations from the rigid "by the book" performance of countdown.

While some Convair men may have harbored some doubts, the countdown went smoothly.

"One of our best," MacNabb said.

Tom Mahnken, Astro photographer, was in the blockhouse to maintain a film record. He reported a strict attention to all details, followed by the usual elation of a successful launch. Although the men in the blockhouse could not see the missile, they followed its performance through recording instruments.

"One man followed the performance of the sustainer engine," Mahnken recalled. "When it continued to function beyond the normal cut-off point, he started to report but Mr. Maloy (Travis Maloy, chief test conductor) was at his shoulder and told him everything was all right."

Maloy was one of the few men in the blockhouse who was "in the know."

Following the launching, most of the men went home. Only later did they learn of the feat after President Eisenhower's terse announcement.

At the Astro plant the usual number of people knew of the pending launching, although very few knew the "whole truth."

Some followed pre-launch operations via teletype messages coming from Florida.

This system is unique in itself. Classified messages are typed into a machine in natural form where they are coded for transmission. At their destination, they are de-coded by another machine and typed out in normal language.

Operators thought the system had "blown a fuse" when it suddenly spewed forth messages in a garbled form. What actually happened was the machine had switched to a pre-arranged code, readable only to those few who held the key.

Perfection and testing of the unique communications equipment aboard the satellite was another case of many helping, few knowing.

The satellite's antenna radiation system, which allows it to receive and send both voice and teletyped messages, was designed, fabricated and tested at the Astro plant. Men in the radiation systems laboratory who did much of the work knew it simply as "another project."

George C. Tweed Jr., an electronics design group engineer, is credited with much of the design work on the system. Tweed, Vince Moffatt and John Anderson of Astro, plus an engineer and technicians from the Army Signal Corps, made the installation of the system in Florida.

"We simply didn't introduce our Army companions to those in Florida," Tweed said. "They were taken as 'more guys from San Diego'."

One of the last rituals performed before countdown was the loading of the communications system with President Eisenhower's now-famous Christmas message to the world.

Another little known fact about the Atlas 10-B is that it carries a simple, penciled message: "In memory of Dr. Hans Friedrich."

Astro Congratulated On Satellite Launch

Following is the text of a letter from Frank Pace Jr., president of General Dynamics Corporation, to J. R. Dempsey, Convair vice president and manager of the Astronautics Division.

Dec. 22, 1958

Dear Jim:

I have waited for the time when a thorough evaluation of our Atlas satellite performance might be had to write you my own feeling. Suffice it to say that this constitutes a major contribution to our country's prestige and to the security of the free world and, incidentally, enhances the prestige of our own company.

At this time I have a strong sense of pride in my own team—its competence and its contributions—and the feeling that over and beyond our performance in the eyes of our stockholders, we have earned recognition in the eyes of our countrymen and the whole free world. So, to you, and your people, who have performed so well, my special congratulations.

Sincerely,
Frank Pace Jr.



BIGGEST EVER—The XC-99, world's largest land-based plane, is backed into site on private property west of Kelly AFB where it will be set up as memorial by Department of Texas, Disabled American Veterans.



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

Convairity

Vol. 12, No. 2

Wednesday, January 21, 1959

SAN DIEGO, POMONA AND ANTELOPE VALLEY, CALIFORNIA

Astronautics
EDITION

(Serving Astronautics Division of Convair)

Astro news office, Bldg. 2, new plant, ext. 1154.

DAINGERFIELD AND FORT WORTH, TEXAS



FIRST CREW—First men at controls of Convair 880 during initial taxi tests are, left to right, R. L. Runnalls, in charge of 880 flight test program; J. E. Moroney, senior flight test engineer; E. H. Davies, senior instrumentation engineer; R. M. Bloom, senior control engineer; D. P. Germeraad, chief pilot; J. W. Knebel, co-pilot; B. B. Gray, senior control engineer.

Anti-Missile Work Approved

The Advanced Research Projects Agency of the Department of Defense has contracted with San Diego Division for two major studies totaling more than \$2 1/2 million on advanced ballistic missile defensive systems. B. F. Coggan, Convair vice president and SD Division manager, announced last week.

One contract with the Air Force's Air Research and Development Command is for theoretical studies and limited experimental investigation of various kinds of ballistic missile defensive systems.

Another is for basic research into the various phenomena involved in the operation of ballistic missile systems and defenses against them. After detailed negotiations between Convair and the Air Force Cambridge Research Center and the Army Rocket and Guided Missile Agency at Huntsville, Ala., the contract will be submitted to ARPA for approval.

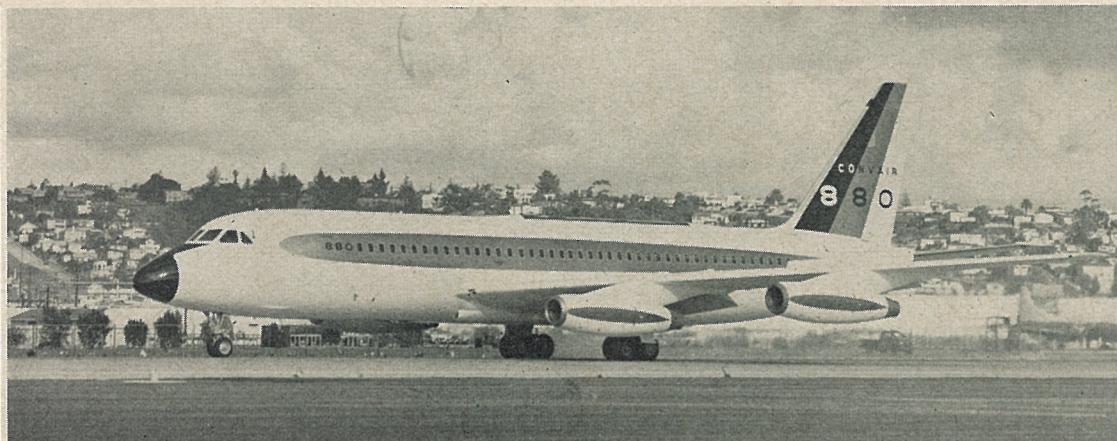
In both contracts, ARPA will provide broad policy and technical guidance. The Air Force Air Research and Development Command and the Army Rocket and Guided Missile Agency will be responsible for detailed administrative and technical direction.

Within Convair, all the work for ARPA under these contracts will be under the direction of J. M. Pasternack.

For nearly four years he has directed Convair and Air Force-supported Wizard anti-ICBM system studies.

Pasternack, a native of Allentown, Pa., joined Convair's engineering department Jan. 14, 1952. He is a graduate of Rutgers University and MIT, Cambridge, Mass., holding BS and MS degrees in mechanical and aeronau-

(Continued on Page 2)



880 IN MOTION—Convair SD's first jet transport now going through high-speed taxi tests on Lindbergh Field before first flight scheduled for this weekend. Slow-speed taxi tests two weeks ago proved "satisfactory in every way."

Stroud Will Head New F-108 Wing Program at San Diego Division

W. S. Stroud will head up the new F-108 wing program at Convair San Diego, B. F. Coggan, Convair vice president and SD Division manager, announced recently.

As assistant to the division manager, Stroud will be in charge of the program under which Convair SD will design and build the wing for the Air Force F-108 long-range interceptor.

Awarding of the multimillion-dollar contract to Convair SD was announced recently by North American Aviation, Inc., who is responsible for the building of the Air Defense Command triple-sonic interceptor. Convair SD was chosen from 10 competing companies because of its "design and technical capability, ability to produce, probable cost and program management," according to the statement of Raymond H. Rice, vice president of North American Aviation, Inc.

Research and design of the wing will start immediately with

manufacturing development to get under way in the near future, said Stroud. However, there will be a lag of several months before direct construction is begun. Due to the type of construction involved, new designs of machines will be required which will be worked out, for the most part, in Convair's tooling departments.

All of the tooling and manufacturing will be done at SD Plant 2 together with production of the F-106 under surveillance of J. H. Famme, Plant 2 works manager.

An eventual increase in employment at Plant 2 is expected as the program goes into production. Peak employment for the initial stages of the project should be reached by early next year, according to Stroud.

Stroud has been program control administrator in master planning since 1955, and was project administrator for the R3Y, 340, and T-29.

Other definite appointments to the program so far include J. E. Hughes, in charge of engineering; W. P. Woods, tooling; and E. F. Monsees, purchasing agent.

The F-108 will be a manned interceptor designed to launch an atomic missile 1000 miles away from its base and return in half an hour. It will be capable of speeds of over 2,000 miles per hour and altitudes of more than 70,000 feet.

Film, Music, Talks Scheduled For Astro

Two informative talks, an unusual film and stereophonic music is included in planning for the "Ladies' Night" meeting of the Astronautics Management Club tomorrow night (Jan 22) at El Cortez Hotel.

J. R. Dempsey, Astro manager, and R. F. Smith, chief of educational services, will speak.

Social hour will begin at 6:30 p.m. with dinner at 7:30 p.m.

(Continued on Page 2)

Astro Gets Nod to Build 'Upper Stage' For Atlas

Many Convair Astronautics men and women are slated to get "into the act" in developing and building an "upper stage" for a modified Atlas ICBM under a contract announced for the first time last week.

The contract, amounting to almost \$7 million in the first year, was awarded to Astronautics by the Air Force's Air Research and Development Command under authorization by the Advanced Research Projects Agency.

Astronautics will be systems

manager for the project with full responsibility for design, construction and test of the vehicle and all its systems except the engine. The upper stage engine will be developed by Pratt and Whitney Aircraft.

Roy W. Johnson, ARPA director, has revealed this high energy, liquid-fueled upper stage vehicle utilizing an Atlas-type booster can put into orbit a satellite weighing several thousand pounds.

(Continued on Page 2)

First 880 Flight Near as Taxi Tests Resumed

Convair's first jet transport will streak aloft on its maiden flight before the end of this month by present schedule.

At the controls of this sleek, swept-winged bird will be Don Germeraad, chief engineering test pilot, and P. M. Prophett, assistant chief engineer-flight test, as pilot and co-pilot.

Also aboard on the initial test hop will be J. E. Moroney, senior flight test engineer; E. H. Davies, senior instrumentation

engineer; R. M. Bloom and B. B. Gray, senior control engineers.

After its first flight, the Convair 880 will land at the Naval Air Station on North Island. It will be based there during its initial test flights to check out flight characteristics and performance, said G. E. Putness, chief of engineering flight test.

It will be stationed at North Island for two or three weeks during which it will log its first 10 hours in the air. Convair SD field operations crews will ferry back and forth by surface craft to maintain the plane, explained Steve Barinka, 880 superintendent. About 30 men will be working on two, and possibly three, shifts to service the 880 during flight tests.

After the first four or five flights needed for the ten hours in the air, plane No. 1 will be returned to Lindbergh Field for the rest of its flight test program which will extend to May of 1960, with the exception of six to eight weeks this summer when it will be at Edwards AFB for takeoff and landing trials.

In first taxi tests two weeks ago, the Convair 880 proved to have "terrific acceleration," said Germeraad.

The plane was taxied the length of Lindbergh Field four times at speeds from 40 to 80 miles an hour. The instrumentation engineer, E. H. Davies, remarked that he was rocked back in his seat so abruptly at time of brake release while holding takeoff thrust on all engines that he had difficulty reaching the switches.

General taxiing characteristics, brakes, steering, and lateral control checked out perfectly, said

Baby Born on Xmas; So Was His Father!

Christmas Day's first baby in San Diego County and the first 1959 birth in Pomona were born to Convair parents.

Mr. and Mrs. Richard N. G. Steele (Astro Dept. 322-9) are the parents of Lawrence Noel, born 12 minutes after midnight, Dec. 25, at Grossmont Hospital. He weighed 6 lbs., 14 oz. The "N" in his father's name stands for Noel. He also was born on a Christmas Day!

Julie Ann Jarosh, born at 1:53 a.m., Jan. 1, at Pomona Valley Community Hospital is the daughter of Convair Pomona's Frank J. Jarosh (Dept. 51). She weighed 7 lbs., 6 oz.



JET PILOT—Don Germeraad, veteran Convair pilot and former Navy flyer, makes himself at home in jet 880 cockpit during taxi runs.

Convair Taking Applications

Applications for the annual Convair sons' scholarship program which provides undergraduate education in engineering or an allied science are being accepted now at SD and Astro.

One Astro and two SD sons or stepsons of employees who have been with the company five years or more will receive this year's scholarships. Students must be graduating from high school this year, or have graduated within the last two years.

Winners will receive awards to cover tuition and laboratory fees, and an additional \$250 a year for expenses at any accredited college or university offering degrees in engineering or an allied science. The scholarships are for a maximum of five years of study.

Applications and information (Continued on Page 2)

Lillian Clothes Grabs a Broom

such training at Astro's operation at the Air Force Missile Test Center in Florida. He had been working with a group of engineers and was awaiting the conclusion of tests to return to his job in Hangar "J" when a supervisor spotted him standing idle.

Relocation of the over 4,000 engineers involved in the program has been complicated by the increase in personnel since last spring, with over 500 added to the department.

Everyone working in the buildings has been moved two, and in some cases three times before being assigned to permanent locations.

Modernizing of the two buildings is due to be completed some time in June, two or three weeks behind the originally-scheduled (Continued on Page 2)

Astro Gets Nod to Build 'Upper Stage' For Atlas

(Continued from Page 1)

In planning the project, J. R. Dempsey, Astro manager, has



Kraft Ehrcke

down the line to fabrication, sub-assembly and assembly operations.

As with most defense projects, Astronautics is striving to hold actual costs to the lowest possible point. Toward this end, much experience gained in development of the Atlas and its components is being employed through design, component fabrication and assembly, Davis pointed out.

"Noteworthy is the fact this project was conceived so that no basic changes are needed in the Atlas ICBM," Davis said. "Only certain alterations of the nose will be required to accommodate the upper stage."

Because of this factor, Astro will be able to utilize most of the existing equipment and facilities used in Atlas production. For instance, tooling fixtures, for the most part, can be modified for work on the upper stage project, then reverted to normal Atlas production use. And much of the checkout, ground support and other equipment necessary for this project can be drawn from Atlas use.

"When we enter the test periods, practically every test item can be utilized with modifications for this new project," Davis said.

Due to the great interchangeable factor, most departments and functions will be able to assign employees to the project with a minimum of extra training, an important cost reduction item.

Although Pratt and Whitney will have representation at the Astro plant for coordination, no specific project office is contemplated at this time. Astronautics, on the other hand, will set up an office at Pratt and Whitney.

Anti-Missile Work Approved

(Continued from Page 1)

tical engineering.

Before coming to Convair he had been in charge of engineering sales as Wadell Aircraft Industries, Inc., Garwood, N. J. He had also served in the U. S. Navy Bureau of Aeronautics in Washington, D. C., and at Burbank, Calif. From 1947 to 1951 he was an research head in the Office of Naval Research, USN, at Washington, D. C.

The contracts are a new responsibility under ARPA's one-hundred million-dollar 1958-59 program to develop new ideas and new techniques that may lead toward the evolution of advanced area defense systems against ballistic missiles.

It's Time to Apply For Scholarship

(Continued from Page 1)

explaining the program have been distributed to high schools in the area. They are available within

the plant at engineering educational services office, Bldg. 5, Col. 5-2-E; Plant 1 educational services, Bldg. 14, second floor; Plant 2 educational services, Bldg. 2, mezz., and Astro educational services.

Forms with transcripts of grades must be turned in by Feb. 27.

Applicants will be notified by March 16 of their eligibility and time and place of personal interviews. Winners will be announced as usual about April 1.



APPRECIATION—Scout David Henry visited Convair President J. V. Naish recently to present him with "Living Gift" certificate in appreciation of Convair's contribution toward Mataguay Boy Scout Camp development.

Astro Updates Phone Book

A new Astronautics telephone directory, first official issue since activation of the new plant, was expected to go into the mails at all Astro functions this week.

Prepared by the office services section of industrial engineering, the new directory contains approximately 4,000 listings.

It consists of five major sections, each containing specific information to assist the telephone user. For instance, a service section contains emergency numbers, frequently called numbers and information on dialing Astro's many off-site facilities. There is also a management section listing top men in each department.

Distribution of the directory will be made through normal mail facilities. A functional (yellow pages) section is also in the works and should be ready in about 60 days. On order are binders for the directory. They will be made available in the near future through stationery stores.

CONVAIR TO STUDY SUB-ZERO COOLANTS UNDER AF CONTRACT

Convair San Diego has received a \$132,028 contract from the Air Force for a year's investigation into the use of sub-zero coolants in machining.

The program will include survey of different materials and coolants, evaluation, and simulated production to be done for the most part at Plant 2.

Plans call for experiments with seven different types or combinations of coolants at temperatures down to minus 150 degrees F. Effects of their use on different kinds of machines will also be under study.

Manufacturing development, headed by F. A. Monahan, is supervising the investigation with C. G. Farnsworth, project director.

State College Staff To Hold Interviews

Three representatives of San Diego State College will be at Convair Astronautics Feb. 2 and 3 to interview prospective students for the spring semester.

They will talk with those interested in earning bachelor or master of science degrees in business administration as well as those interested in the certificate program in industrial management.

Interviewers will be Simon Reznikoff, Louis Shuster and Glenn Hodge.

Those interested are asked to call either Jack Block or Alyce Martin of educational services, ext. 1471, for appointments. Appointments will be taken at 15-minute intervals starting at 8:30 a.m. each day.

Schriever Gives Astro 'Well Done' For Atlas

(The following letter, dated Jan. 13, 1959, was addressed to J. R. Dempsey, manager of Convair's Astronautics Division.)

Dear Mr. Dempsey,

It is with a deep sense of gratification that I take this opportunity to express to you and your entire organization my appreciation for the splendid job you have done during the past year.

The culmination of the year's effort is, of course, exemplified by the spectacular success of Project Score, to which your organization contributed so materially. The detailed engineering and system integration task accomplished by Convair Astronautics within the severe security restrictions that were imposed, reflect great credit upon the entire organization and particularly upon those individuals who were directly charged with the responsibility for the project. To me, however, this represents the outward manifestation of a whole series of equally important milestones successfully passed in our mutual effort to provide the country with an ICBM capability at the earliest possible time. Although these latter events did not receive the public acclaim given to Project Score, they were perhaps even more significant to our basic mission.

I know that there are still many difficult problems ahead of us in 1959, but if they are attacked with the same vigor, enthusiasm and "know-how" that you and your people have so freely given during 1958, I am confident that these problems will be solved and our schedules will be met.

Sincerely,

B. A. Schriever, Major General, USAF, Commander, Ballistic Missile Division.

Rehabilitation Work Continues

(Continued from Page 1)

date of May. Slippage of construction schedules has been due mostly to material shortages and delivery delays, say industrial engineers in charge.

The exterior of Bldg. 5 will be finished by the end of February.

Permanent heating throughout the two buildings will be installed by March 15 and air cooling equipment will be ready for use by May. All areas now are being heated with temporary equipment and ventilation was installed Dec. 24.

* * *

Current moves will see personnel and equipment of the blueprint reproduction group permanently located this weekend in their former location on the second floor of Bldg. 5.

A reshuffling of over 100 engineering people in structures, wing, tail, and body groups on the third floor of Bldg. 51 next week (Jan. 30) will clear a portion of Zone 10 for construction work.

Medical Deduction Figures Listed for Income Tax Returns

More Key Positions Filled In Product Support Dept.

Key supervisory positions in the new product support department support center (Dept. 340) were filled this month at Astronautics in appointments made by E. A. Reynolds, Astro's product support manager.

They include: W. W. Pierce, support center manager; K. R. Aiken, acting chief of support supply; L. I. Medlock, chief of support quality control; I. B. Jenkins, chief of support manufacturing control; and J. M. Rogers, superintendent, support center.

W. W. Pierce, director of all support center operations, has been associated with the aircraft industry since 1927. He has held top positions with airlines and airline maintenance firms both in this country and overseas. Pierce first worked for Consolidated Vultee Aircraft from 1939 until 1943, rising to the job of chief inspector at Vultee Field. He came back to Convair in 1950 at Fort Worth and served as superintendent of both fuselage final assembly and development. He transferred to Astro in 1957 and served in Florida before joining product support as an assistant to Reynolds early last year.

Aiken is a former Convair em-

ployee (1937-48) who rose to be an assistant superintendent. He moved to Rohr Aircraft in 1948. He advanced to purchasing agent there and returned to Astro in August, 1958, as a product support staff assistant. He is a native of Troy, N. Y. who attended schools in Detroit and Los Angeles.

Medlock is a long-time Convair man whose service dates back to 1941 when he joined Convair as a student inspector. He moved up to inspector, leadman, assistant supervisor and supervisor at Convair SD before transferring to Astro as a general supervisor in 1956. He came to product support in August, 1958.

Jenkins first joined Convair in 1941 as a timekeeper. He was a junior accounting clerk when he left for a four-year Army tour of duty. In 1952 he returned to Convair in industrial engineering and moved into material operations that same year. One year later he switched to manufacturing control, rising to general supervisor. He joined Astro in 1958 in the same capacity.

Rogers came to Convair in 1940 as an electrician's helper. He rose quickly to general foreman during the war, then became a superintendent. He left the company following the war, returning in 1947 and again advancing to general foreman before moving to Astro in 1954 as final assembly general foreman. He also worked in missile checkout before shifting to product support.

Experimental Winner of Annual Safety-Housekeeping Contest

Experimental (Dept. 31) emerged winner of the annual safety and housekeeping contest at Convair San Diego after a neck-to-neck race with manufacturing control, Plant 1 (Dept. 192).

At the end of December, experimental stood two points ahead of the runner-up, said M. C. Val Dez, SD chief safety engineer. Manufacturing control was last year's winner of the annual award with a score of 20 out of a possible 24 points.

During the year, Dept. 31 with 1,612 employees had garnered 15 monthly awards, seven for good housekeeping and eight for safety, while manufacturing control had one housekeeping and 12 safety awards for a total of 13. In third place was 880 major mate, final assembly, and plastics with a score of 11.

The two leading departments stood tied in September with 880 major mate trailing by one point.

One point is given each month to winners in safety and housekeeping contests, making a possible perfect score of 24 points for the year.

Departments are judged each month in safety contests on number of serious doctor cases per number of manhours worked. Monthly housekeeping contests check departments on cleanliness and orderliness, material handling, fire, and safety inspection determining the percentage of violation per employee.

Winner of the contest for the year will receive an award from Division Manager B. F. Coggan at the annual safety and housekeeping trophy dinner which will be held some time in the spring, said Val Dez.

Electronics Winner Of Yearly Contest

Dept. 772 (electronics) at Convair Astronautics came through as top function in the annual safety-housekeeping records by winning first in December totals.

Dept. 772 won five housekeeping and 11 safety firsts for the year, slightly ahead of Dept. 214 (traffic and stores) with five and seven.

Convairity

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations. General Offices, San Diego, Calif., Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Grace Fath, Helen Pemberton, Fred Bettinger.

Astronautics Editorial Offices, Bldg. 2, new plant, ext. 1154. Staff: Bryan Weickersheimer, news editor.

FW Editorial Offices, Col. 69C, mezz., ext. 2961. Mailing address: Convairity, Convair, Fort Worth, Texas. Telephone PErshing 8-7311. Staff: Bob Vollmer, news editor; Bobbie Sue Marr, Horace A. Baker Jr.

Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Offices, Room 31, Bldg. 301B, Palmdale, ext. 337. Staff: Betty Lou Nash.

Numerical Control Committee Holds Conference at Plant 2

Representatives from all Convair divisions and Stromberg-Carlson gathered at San Diego Jan. 7 for the second General Dynamics Corporation interdivision numerical control committee meeting.

Fifteen men from Convair San Diego, Fort Worth, Pomona, and Astronautics, and Stromberg-Carlson, all active in numerical control and computing operations, joined in topics of mutual interest. J. H. Famme, Plant 2 works manager at SD, chairmanned discussions dealing with problems of integration and operation of numerically-controlled equipment.

Membership of the committee, which met for the first time last fall, is: Famme, M. C. Copold, H. G. Cooper, and E. J. Penner of SD; J. B. Rankin of Fort Worth; R. Morris, Pomona; C. B. Young, Astronautics; and Jack Rosenberg of the E.C.S. Division of Stromberg-Carlson at Los Angeles.

TOOL ENGINEERS CONFER JAN. 29-30

Chief tool engineers of all Convair divisions will meet at Convair San Diego Plant 1 to discuss subjects of mutual interest on Jan. 29-30.

R. W. Peters, chief tool engineer of SD Plant 1, sponsor of the meeting, said that discussions will deal with general tooling topics, exchange of tooling ideas, and ways and means of cost reduction.

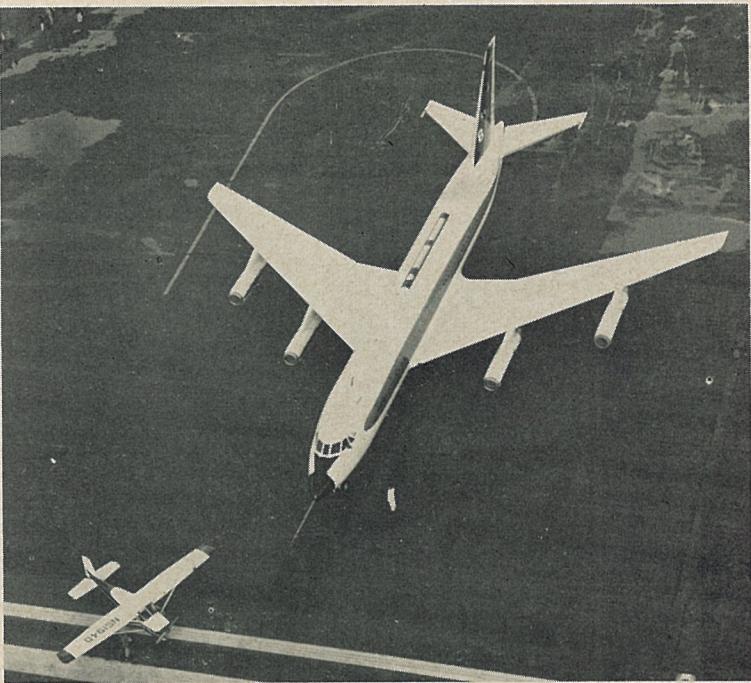
Attending will be W. P. Woods, SD Plant 2; A. T. Seemann of Pomona; L. G. Granstedt of Astronautics; and R. A. Fuhrer from Fort Worth. Meetings are held regularly every four months.

SD Men Attend 880 Training

Nine Convair San Diego men are scheduled to attend current classes pertaining to operation and equipment of the Convair 880 jet transport.

At a one-week training school of Kollsman Instrument Co. at Elmhurst, N. Y., to become familiar with the Kollsman integrated flight system (KIFS) are E. R. Buckman, field service engineer; C. L. Johnson and L. W. Hughes of production flight; and R. R. Sharp of service publications.

Five production flight personnel will go to TWA headquarters in Kansas City, Mo., to monitor the Boeing 707 school. They will study teaching methods and material presented there as a guide to the coming 880 customer training courses. Besides Johnson, other Dept. 12 men auditing the classes will be L. J. Rice, L. M. Norton, C. J. Falkenthal, and J. B. Van Houten.



IN THE OPEN—Glistening white, new jet 880 transport at San Diego dwarfs private plane on Lindbergh Field at San Diego. No. 1 ship was taxi testing this week and may fly this weekend.

880 Cockpit Procedures Trainer Due to Arrive This Week at SD

Production flight department at Convair SD is preparing to welcome what promises to be the most important training aid for the Convair 880—the cockpit procedures trainer—due to arrive this week.

The quarter-million-dollar trainer, first of its type to be used for jet transport training, was to have left Cincinnati, Ohio, where it was built by Burton-Rodgers, Inc., on Jan. 17.

It will be shipped in three sections by truck to San Diego. Following its arrival, it will be reassembled under direction of a Burton-Rodgers representative and set up in a special room reserved for it in the 880 customer training section on the lower floor of Bldg. 4, Plant 1.

It will be put into operation about Feb. 1 to start the 100-hour test period which is necessary before final acceptance.

Preliminary acceptance and checking of operational performance to determine if the trainer conformed to specifications was accomplished by P. H. Selby, production flight training supervisor, and A. P. Wilson, senior pilot, before the trainer left Ohio.

Convair 880 pilots, both of pro-

duction flight and engineering flight test, will be checked out on the procedures trainer, an exact replica of the 880 cockpit with full-scale controls reacting as in actual flight.

Esenwein Speaker For AF-Industry At Palm Springs

August C. Esenwein, Convair executive vice president and former Fort Worth Division manager, was among 16 speakers to address the 38th Air Force-Aircraft Industry Conference last week in Palm Springs, Calif.

Esenwein, like representatives from North American, Northrop and Boeing, spoke on "Airframe."

Other topics including "Engine," "Sub Systems," "Production Teamwork," "Development and Test Teamwork," and "In Service Support Teamwork" were discussed by Air Force and aircraft industry people.

Theme for the four-day conference was "Teamwork," and major speaker was Lt. Gen. Clarence S. Irvine, deputy chief of staff, Materiel, Headquarters USAF.

Baby Born on Xmas; So Was His Father!

Christmas Day's first baby in San Diego County and the first 1959 birth in Pomona were born to Convair parents.

Mr. and Mrs. Richard N. G. Steele (Astro Dept. 322-9) are the parents of Lawrence Noel, born 12 minutes after midnight, Dec. 25, at Grossmont Hospital. He weighed 6 lbs., 14 oz. The "N" in his father's name stands for Noel. He also was born on a Christmas Day!

Julie Ann Jarosh, born at 1:53 a.m., Jan. 1, at Pomona Valley Community Hospital is the daughter of Convair Pomona's Frank J. Jarosh (Dept. 51). She weighed 7 lbs., 6 oz.



CONFERENCE—All Convair divisions were represented at numerical control meeting held at San Diego recently. Left to right (sitting) are: E. A. Bates, SD; M. C. Copold, in charge of numerical control activities at SD; Hal Holmerud, Astro; J. H. Famme, SD Plant 2 works manager; J. B. Rankin, Fort Worth; C. B. Young, Astro; and E. J. Penner, SD. Standing are (left to right) John Tarbox, E.C.S. Division of Stromberg-Carlson, L.A.; W. J. Whitehill, Pomona; Ruck Byrne, Astro; A. P. Langlois, SD; Paul Lewis, Astro; O. W. Sweetland, SD; Ben Ferber, SD; and R. Morris, Pomona.

B-58 Power Plant 'Flies' at Altitude But Never Leaves Ground at FW Plant

They're flying "high and mighty" at ground level these days at Convair Fort Worth's jet engine test stand in the northwest corner of the reservation.

Test engineers have taken a regular J79 jet engine installed in a B-58 production inboard nacelle and are in the midst of checking it at various simulated altitudes and mach numbers.

Although the engine actually remains at static sea level, a simple adaptation permits creation of high altitude conditions up to 27,000 feet.

Testing on the present project got under way in December. According to C. L. Jackson, control engineer, the present test series is scheduled to be complete sometime in February. At that time the engineers will tackle another phase of the engine test program.

"Overall objective of the present test is to find a way to measure absolute thrust," Dave

Smith, power plant design engineer, commented.

Test Engineer R. S. Carter said tests generally run about two to four hours.

All engine conditions are carefully monitored in the test control room. Various pressures are reported through giant manometers located on both sides of the control room.

Because of the constant roar of the jet engine throughout the test period, the chief engineer and others directly connected with the project wear special intercom head sets.

After the testing is over, data is gathered for study and analysis.

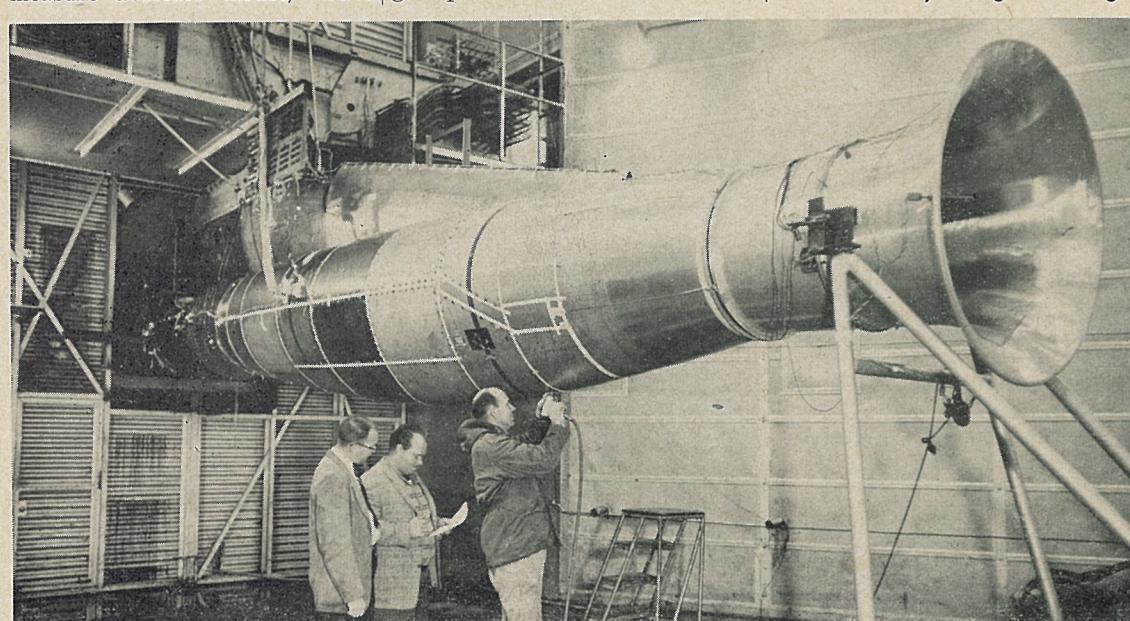
George Stewart is foreman in charge of the test area.

Numerous sea level static tests also can be conducted, such as power plant system evaluations, starting characteristics and engine performance. Tests are also

made to determine the effect of jet engine exhaust gas temperatures and noise on airplane structure and equipment.



MASTER CONTROL—R. S. Carter, perched on the chief engineer's stool during testing, is aided in the control room by, left to right, Cliff Leath, Mike Lake, George Stewart, Dave Smith, C. L. Jackson, E. F. Burns and Clarence Borden. They carefully monitor condition of jet engine during run.



AFTERMATH—Following the test, left to right, C. L. Jackson, test engineer; R. G. Helton, control engineer, and E. R. Coombes check jet engine inside cell.

AF Captain in Civilian Clothes Does as Told and Grabs a Broom

When the Air Force instructs its men to "fit," few question the reason even when it involves a broom in a clean-up detail.

Or so it would seem, judging by the experience of Capt. H. T. Ponder, maintenance officer for the 576th Strategic Missile Squadron, Vandenberg AFB, now in training at Convair Astronautics.

While the majority of the almost 200 Air Force officers and enlisted men now undergoing training with Astro's product support department wear their uniforms, there are occasions when they discard them in favor of civilian clothing. This occurs, normally, when small groups are engaged in "on-the-job" training programs. They have orders to "fit" within the surroundings. Captain Ponder was engaged in

such training at Astro's operation at the Air Force Missile Test Center in Florida. He had been working with a group of engineers and was awaiting the conclusion of tests to return to his job in Hangar "J" when a supervisor spotted him standing idle while a crew was "sweeping down." He was told to "grab a broom and lend a hand."

Captain Ponder did as he was told and soon had the dust flying.

Early this month E. A. Reynolds, Astro's manager of product support, and Col. J. J. Easton, the 576th commander, called Captain Ponder into a conference.

He was presented a special plaque naming him a charter member of the "Order of Crossed Brooms," in respect for an officer who became "one of the crew."



TRAVEL AIDES—Left to right, Marion Rogers, Carolyn Jones, and Dottie Luscomb in Convair SD's travel reservations office route an average of 30 air trips a day for company business in all parts of world.

Travel Reservations Office At SD Becomes 'Big Business'

Travel reservations office at Convair SD is settling down to normal after the rush of extra work during the recent airlines strike.

Throughout the three-week American Airlines strike, the three girls manning the office headed by Dorothy Luscomb worked late hours, missing lunch times and coffee breaks, to obtain air accommodations for Convair travelers.

(Since American Airlines is the only line connecting San Diego with Dallas, Texas, company travel between SD and Fort Worth Divisions had to be rerouted by northern lines or through Mexico.)

According to Mrs. Luscomb, who has seen the travel office grow from a \$5,000 a month business ten years ago to a present average of \$125,000 per month, at no time in her experience had it been so difficult to arrange air transportation.

Many Convair meetings and appointments had to be cancelled or rescheduled during the strike weeks. However, by the time service was resumed, Convair SD reservations office had obtained accommodations for all company people on the long waiting list, although in many instances it had taken a couple of weeks to make the necessary connections.

Two others, Marion Rogers and Carolyn Jones, have been added to the staff in recent months to help handle the growing operation. Convair spent more than \$1,200,000 during 1958 on air travel for SD Division and General Office business with 6,700

reservations made through the SD office.

Since foreign travel has become a necessary part of Convair operations, trips are arranged through the travel office to every part of the world, said Mrs. Luscomb. Fifty wires a day are necessary and three phones are in almost constant use to set up trip reservations.

Convair receives no discount whatever on any air transportation. The plant office handles only reservations for company business. The office, located on the second floor of Bldg. 19, Plant 1, is a part of the office services section of material office.

Convair Son Leads Xmas F-102 Flight In Tree Formation

For Mrs. Edith Lister Wight of Dept. 6-56 at Convair SD Division the accompanying photograph of F-102s in Christmas formation has a special meaning. Her son, Lt. Col. Carroll H. Wight, commanding the 11th FIS at Duluth, Minn. is leading the formation.

Mrs. Wight is nearing her eighth anniversary at Convair. Her son is a Hoover High graduate and attended San Diego State before entering the service. He continued his education at Ohio State, obtaining a B.S. degree.



Traveler Rounds Globe During Xmas Vacation

John Watson of Convair Fort Worth gave himself a Christmas present that outdid "Around the World in 80 Days."

He made it around the world—29,000 miles—on his two-week vacation in 78 hours' flying time.

Part of it was by commercial jet, but his last leg turned out to be in a Convair 340 on a flight from Denver to Fort Worth.

Watson, who started on the first leg of his vacation trip from New York's Idlewild Airport, said that the trip was the realization of a life-long dream.

His trip went something like this: from New York City to London; from London to Rome; from Rome to Beirut; and from Beirut to Jerusalem.

He flew back to Beirut from Jerusalem after attending Christmas Eve Mass at the Church of Nativity in the Holy Land, then boarded a plane for India and New Delhi.

After the stopover in New Delhi, he headed for Calcutta, Bangkok, Manila, and Tokyo.

"I didn't meet an American tourist throughout the entire trip," Watson said. "Guess most Americans were staying at home for the Christmas holidays."

Watson previously has made vacation trips to countries in South America, the Caribbean and the South Seas.

SD Man, Associate, to Launch \$15,000, 34-ft., Racing Yacht

When a \$15,000, 34-foot, ocean-going sloop splashes into the Pacific late this year for the first time it will be one of the largest boats ever launched in the San Diego area by do-it-yourselfers.

According to the builders, Convair SD plant engineer T. W. Driver, and Jim Bishop, husband of Edna T. Bishop in Dept. 188-3, it will be especially designed for ocean racing and cruising.

Driver envisions his boat-to-be as a miniature "ocean liner." There won't be a swimming pool, but the boat will include galley, cabin, berthing and other accommodations for six people.

"Right now, it doesn't look like much," Driver said. "But considerable energy and time have gone into the hull alone."

After "test-driving" a boat similar to the kind he wanted in Portland, Ore., Driver had one of

Heart Association Gets Convair Gift

A \$10,000 gift from the Convair SD Con-Trib-Club, first installment of which was paid in 1957, has helped sponsor a new community service in San Diego—the Heart Association's "Work Classification Unit."

Function of this group, located at the Donald N. Sharp Memorial Hospital, is to place back on the job employees of San Diego County business and industry who have recovered from heart disorders.

A team consisting of a social worker, examining physician, vocational counselor and psychologist work together to determine amount of work the recovered patient can perform and which job fits his new physical capacity.

Ice Cream Soothes Four Sore Throats

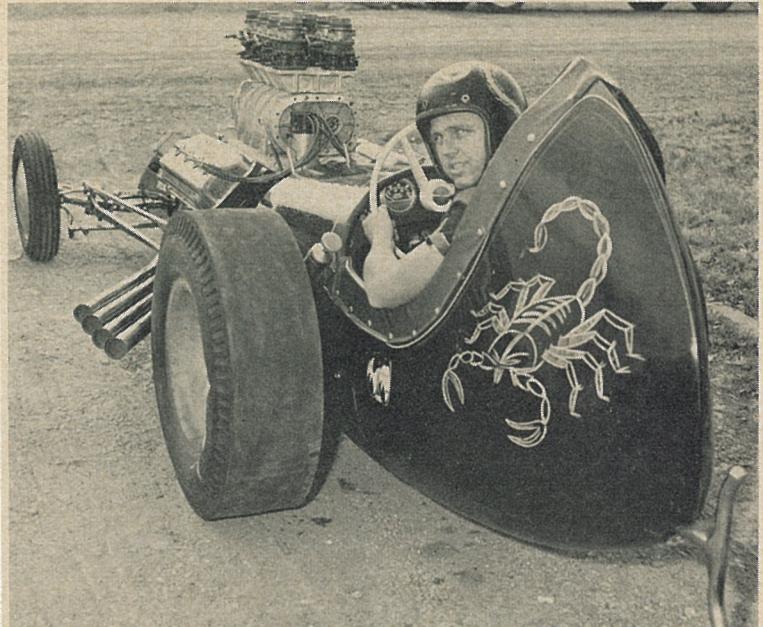
All four youngsters of Mr. (Convair SD, Dept. 6) and Mrs. Melvin Osborn ended up in the hospital one day last week for the same operation.

Andrea, 14, Julie, 10, Michael, 8, and Freddy, 7, were given plenty of ice cream after the ordeal, removal of tonsils.

Their stay in the hospital was extended to two days (instead of the usual one day) so Mrs. Osborn could rest up before taking care of all her "wounded warriors."



FLYING CHRISTMAS TREE—Squadron of F-102s, led by Lt. Col. Carroll H. Wight (son of Edith Lister Wight, Convair SD Dept. 6-56), streams skyward in Christmas-tree formation as 10-year-old Patrick Tighe waves greeting. Picture of 11th FIS at Duluth, Minn., was chosen as official holiday greeting by Air Force.



SCORPION II—Dragster Bobby Langley of Convair Fort Worth's Dept. 81 pauses before take off in his \$2,500 Scorpion II drag racer. Langley holds Texas record.

Fort Worth Tool and Die Maker Holds Texas Drag Race Record

Convair Fort Worth's Bobby Langley of Dept. 81 thinks no more of driving 169.49 mph from standstill in 9.13 seconds than he does driving a conservative 30 mph on a Sunday afternoon sight-seeing trip.

Langley, who holds the Texas drag race record, has raced from coast to coast and recently returned from Bakersfield and Riverside, Calif., where he took

top honors among dragsters from all over the United States.

The 27-year-old tool and die maker, who has been in the drag game since he was 20, races a specially built dragster called Scorpion II. It took Langley three months and about \$2,500 to build.

Langley and his Scorpion II have been written up in leading racing magazines including "Hot Rod" and "Speed Mechanics," and they have also been pictured in "Life."

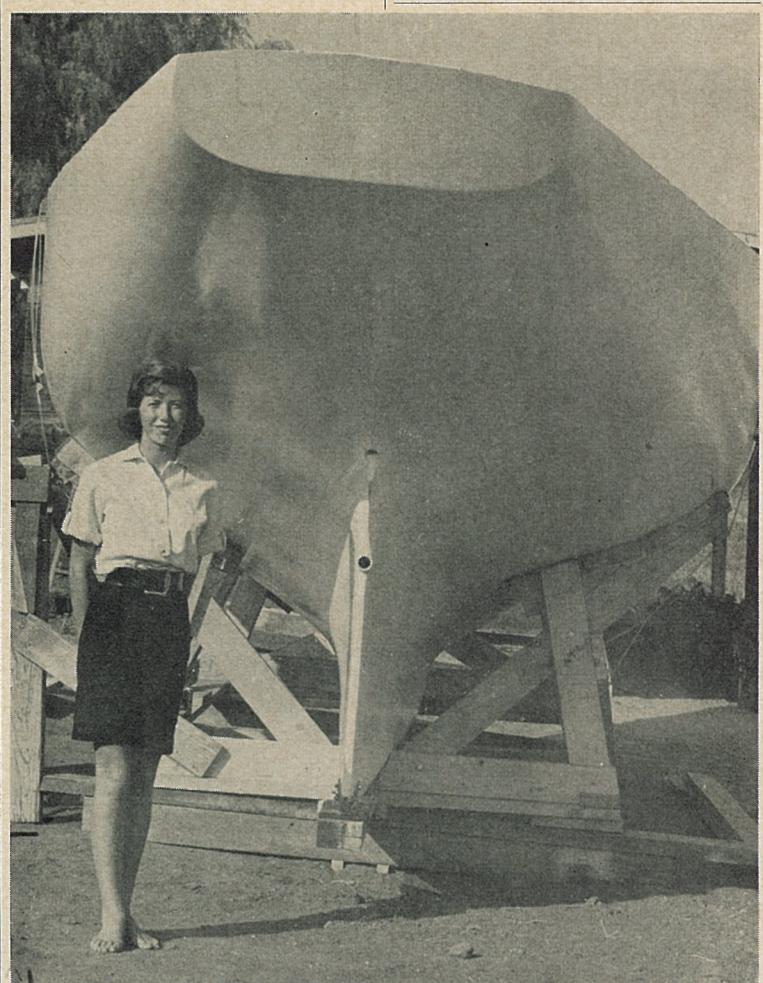
"Drag racing is an acceleration test of one-quarter mile straightaway from a standstill. It falls roughly into five classes: stock car, modified, coupe and sedan, roadster, and dragster," Langley explained.

He says that his dragster idles at 3,000 rev. per minute, which is equivalent to something like 85 to 90 mph. He says there is no jar on the take off and that it's like riding a roller coaster—only more so.

There is no blast on the face at acceleration because of protective goggles and helmet.

Langley's Scorpion II doesn't get the mileage of today's "economy" cars. In fact, it takes about one gallon of pure methane for every quarter mile! The high compression engine boasts eight carburetors.

The Langleys can no longer eat in their dining room because of the 106 trophies scattered over the table and furniture!



IN THE WORKS—Nancy Driver, 16, daughter of Tom Driver, Convair SD plant engineer, stands next to huge hull of sailing sloop scheduled for launching late this year. Over 4,500 lbs. of concrete and iron have been dumped into the fiber glass shell as ballast.

Your Social Security Benefits Explained in Simple, Readable Form

Increased Social Security benefits went into effect Jan. 1 as a result of 1958 amendments to the Federal Insurance Contribution Act.

At the same time, tax rates increased. The F.I.C.A. tax rate is now 2½ per cent of the first \$4,800 of gross wages. Previously it was 2¼ per cent of the first \$4,200.

The rate will increase again in 1960 and for every three years thereafter until 1969 when the rate will have risen to 4½ per cent.

Both Convair and its employees are affected, for whatever sum the employee pays, Convair matches it.

For example, if you made \$4,200 in 1958 you paid \$94.50 Social Security tax and Convair matched it. If you make \$4,800 in 1959 you will pay \$120. In 1969 an employee making \$4,800 will pay \$216 Social Security tax.

Increased tax revenue will provide increased benefits of about 7 per cent.

Some familiarity with how Social Security operates is important, for in some cases failure to apply for benefits will cause you to lose money to which you are entitled.

In general, Social Security benefits the individual and family in three cases: retirement, disability and death.

When You Retire

Workers retiring at age 65 or over can collect payments ranging upward from \$33 a month. (See table). Women workers may retire at age 62 with benefits 20 per cent less than if they continue to work until 65.

Once a worker has retired, the dependent wife or husband upon reaching age 65 may apply for a monthly income equal to 50 per cent of the retired worker's benefit. A dependent wife can elect to receive benefits at age 62, but her payment is then reduced to 25 per cent of the husband's benefit.

Example: Mr. A retires at 65 and receives \$100 a month. Mrs. A reaches 62 and applies for \$25 a month benefit. Or, Mrs. A can wait until she is 65 and apply for \$50 a month. Or, she can apply at any time between age 62 and 65, but the amount she will receive will vary, depending upon how long she has waited to apply.

Dependent children (under 18 or disabled) and a wife (regardless of age, if caring for an eligible child) also may apply for payments half of that being paid the retired worker.

Total monthly payments to a family cannot exceed \$254.

Life Insurance

If you die the following dependents may receive insurance benefits regardless of your age at the time of death:

1. Widow 62 or over.
2. Widower or dependent divorced wife (regardless of age) if caring for eligible child.
3. Dependent widower 65 or over.
4. Dependent parent (mother 62 or father 65).

How to Figure Social Security

If Your Average Monthly Wage After 1950 Is*	If You Retire at 65 or Are Disabled at 50, You Receive	For Retired Couple, both 65, You Receive	For Working Women Retiring at 62, You Receive (20% Reduction)	Your Widow, Widower, Child or Parent Receives	Your Widow and Two Children Receive	Payment to Your Family Can't Exceed
**\$400.00	\$127.00	\$190.50	\$101.60	\$ 95.30	\$254.00	\$254.00
390.00	125.00	187.50	100.00	93.80	250.00	254.00
380.00	123.00	184.50	98.40	92.30	246.00	254.00
370.00	120.00	180.00	96.00	90.00	240.00	254.00
360.00	118.00	177.00	94.40	88.50	236.00	254.00
350.00	116.00	174.00	92.80	87.00	232.00	254.00
300.00	105.00	157.50	84.00	78.80	210.00	240.00
250.00	95.00	142.50	76.00	71.30	190.00	202.40
150.00	73.00	109.50	58.40	54.80	120.00	120.00
50.00	33.00	49.50	26.40	33.00	53.00	53.00

*After dropping out as many as five years of lowest or no earnings.

**A \$400.00 monthly average will generally not be possible for anyone who has reached the age of 21 before 1953. For example, if you retire in 1960 with maximum earnings, your monthly average would be \$370. This is because of the lower maximums on which you were taxed in earlier years of the Social Security programs. See "How to Figure Benefits" above.

Social Security for at least a year and a half after 1950 but HAD worked before 1951, you must use Jan. 1, 1937.

List your earnings in work covered by Social Security for each year beginning with your starting date. DO NOT include more than \$3,000 for any year before 1951, or more than \$3,600 for any year from 1951 through 1954, or more than \$4,200 for any year from Jan. 1, 1955 to Jan. 1, 1959. (These maximums are the levels on which Social Security taxes were based in those years). Beginning with 1959 include earnings up to \$4,800.

In order for you to establish the highest average earnings possible, it is permitted for you to drop out and not consider up to any five years in this period. Naturally, you would drop out the years of lowest earnings and use the remaining years on which to base your average monthly earnings.

Example: suppose an individual has a starting date of Jan. 1, 1951 and has earned the maximum since then. His average income would be computed:

1951	\$3,600
1952	3,600
1953	3,600
1954	3,600
1955	4,200
1956	4,200
1957	4,200
1958	4,200

Eliminating the years 1951-1954 as "low years," the average yearly income would be \$4,200 or \$350 per month.

After Retirement

After retirement there are limitations upon how much you can earn by working.

If you are between ages 65 and 72:

You may receive full payment of benefits due if you earn no more than \$1,200 in a year.

You may receive partial payment if you earn no more than \$2,080 in a year but...

You may receive full payment for months in which you earned no more than \$100 from wages or from rendering services in a business of your own no matter how high the annual earnings.

A point to remember: a person who earns money after he retires may have his benefit refigured to take this pay into account. If it raises his overall earnings average it can mean a higher benefit.

If you are over age 72, you can earn as much as you like and still receive all your Social Security benefits.

When Benefits Stop

Payments of monthly benefits will stop for a number of reasons.

1. When a dependent or survivor marries. Exception: If a widow remarries and second husband dies within a year after marriage and she has no child by her second husband, she regains rights to benefits payable to her at age 62 under first husband's Social Security account.

2. If wife or dependent husband is divorced.

3. If dependent child marries.

4. Payments stop if a child entitled to benefits reaches 18, unless he is disabled.

5. If any person receiving benefits dies.

When Insured

To be eligible for monthly payments for yourself and family or for your survivors in case of death you must have been in work covered by Social Security for a certain length of time.

This is determined using "calendar quarters" as a key. A calendar quarter is a three-month period.

When does a worker become eligible for Social Security death benefits? The minimum requirement is that he has earned six quarters in the three years prior to his death.

A worker who has accumulated 40 quarters (equal to 10 years of work) is fully insured for the rest

of his life, regardless of whether he continues to work or not.

In the case of Convair, determining the "calendar quarters" earned is a fairly simple matter. However, in figuring credit for broken employment elsewhere, farm work or periods when self-employed, you are advised to seek counsel of the Social Security Administration.

Filing a Claim

Before any benefits can be paid a claim must be filed with the Social Security Administration. It is advisable to go in person to your local office, or if you are unable to do this, contact the office by telephone.

Employees Paid \$5,945,000 F.I.C.A. Taxes in '58 and So Did Convair

During the last six years Convair employees have paid approximately \$25,877,000 in Federal Insurance Contribution Act taxes.

And during these six years Convair has paid a like amount, \$25,877,000, in F.I.C.A. taxes for a total of \$51,754,000, ac-

cording to research conducted for Convair in the office of A. G. Rothlisberg, Convair assistant treasurer-taxes.

For 1958, Convair employees paid an estimated \$5,945,000 (approximately \$94.50 per employee) and, of course, Convair matched this sum in payments to the government.

NEWS FROM OTHER DYNAMICS DIVISIONS

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair Ltd. of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., airframe and missile builders.

Electric Boat of Groton, Conn., submarine builders.

Stromberg-Carlson, of Rochester, N.Y., telecommunications, electronic equipment.

Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.

General Atomic of San Diego, Calif., nuclear research, development, production.

Electro Dynamic of Bayonne, N.J., electric motors, generators.

CHARACTRON Tube Used in New High-Speed Recorder For Navy

SAN DIEGO—Stromberg-Carlson-San Diego has installed an S-C 4010 High-Speed Microfilm Recorder at the Naval Proving Ground, Dahlgren, Va.

The system is capable of recording up to 15,000 characters or 10,000 graph plotting points per second. The S-C 4010 is to be used to print tabular data and to plot graphs computed by the Naval Ordnance Research Calculator. The NORC is a large high-speed general purpose digital computer. Uses include high-speed graph plotting of complex mathematical formulae used for computing problems of satellite trajectory, spatial navigation and hydrodynamics.

The Microfilm Recorder consists of a CHARACTRON shaped beam tube (7-inch screen), electronic controls and logic circuitry and an attached 35 mm Traid-Automatic Camera for high-quality permanent photographic recording.

The NORC supplies all intelligence for the selection of alphabetical, numerical or graphical characters and their positioning on the screen of the CHARACTRON shaped beam tube. The

Dynamics Will Aid Republic of Korea

SAN DIEGO—In a new program to promote "Atoms for Peace" in Asia, General Dynamics Corporation will assist the Republic of Korea in establishing a National Atomic Research Institute under provisions of the financial grant to Korea announced in Washington by the U.S. Atomic Energy Commission.

General Dynamics will send scientists and engineers of its General Atomic Division to Korea to serve as consultants in determining the requirements of the Institute, including design of the Institute's initial buildings.

The Korean Government, in turn, will send scientists, engineers and technicians to General Atomic Division's John Jay Hopkins Laboratory for Pure and Applied Science in San Diego.

characters are then projected from the tube face onto the 35 mm film and permanently recorded. Provision is made to advance the film under command of the computer.

Groton Plant Modernizing

GROTON, CONN.—A modernization program is under way at General Dynamics Corporation's Electric Boat Division here to equip the plant's north yard for construction of large nuclear powered submarines.

The renovation will be completed this summer at cost estimated to be in excess of \$2 million.

When the modernization is completed, the keel for the first of a new class of ballistic missile (Polaris) submarines will be laid. The selection of General Dynamics to build that ship, thus far designated only as SSB(N) 608, was announced by the Navy on Dec. 31.

One small nuclear sub, the 2,175-ton, 260-foot killer sub Tullibee, is now being built in the north yard but all previous atomic construction at Electric Boat Division has been assigned to the plant's south yard.

Modernization work will in no way affect production schedules on the seven atomic submarines now in various stages of construction here.

Canadair Newspaper Becomes Tri-Lingual

MONTRÉAL — Canadair Ltd.'s company newspaper, the Canadair News, for years has published both English and French editions to accommodate readers, many of whom speak chiefly French.

Recently the News blossomed out in still another tongue, German! It was only temporary, however, to serve a number of German Air Corps personnel at Canadair for F-86 training!

Charm Course Oversubscribed

About 50 Astronautics women, wives and daughters have signed up for a Beauty and Charm course to be taught by the John Robert Powers School.

Present plans call for the initial session to begin the second week in February at the Powers Studio, Fifth and B, downtown. Subsequent weekly meetings will be held there pending completion of CRA facilities near the plant.

"We are limiting each class to 25 persons to insure individual consultation and attention," said Bunny Ingraham, coordinator for the program for CRA's Women's Council.

Under present plans each student will attend 15 lessons of two hours each. Classes will be held in voice and diction, figure control, visual poise, make-down, wardrobe planning and personality development.

Through CRA subsidy, the entire program is available at a cost of only \$55 to the individual. This may be paid in installments with a \$15 enrollment fee and the remaining \$40 in minimum payments of \$10 per week for four weeks.

To enroll, contact Mrs. Ingraham at ext. 1111 at the Astro plant; Rosemarie at ext. 1920, Plant 1; Doris at ext. 1111, Malvern Bldg.; or Charlotte at ext. 41, Sycamore Canyon.

Log Book Entries

Promotions

ASTRONAUTICS

Promotions and transfers to or within supervision effective Jan. 5:
Dept. 191-1, General Accounting: To payroll supervisor, C. E. Chapman.
Dept. 214-3, Stores & Traffic: To shipping asst. foreman, Alvin Leth.
Dept. 215-2, Material Control: To material control asst. supervisor, J. H. Thompson.

Dept. 270, Quality Control: To quality assurance asst. supervisor, A. B. Dutky. To inspection asst. supervisor, Gr. III, G. D. Koulaixes.

Dept. 300-0, Product Support: To chief of support manufacturing control, I. B. Jenkins. To chief of support quality control, L. I. Mellock. To superintendent, J. M. Rogers.

Dept. 305-0, Product Support Planning & Control: To support planning and estimating supervisor, M. E. Bennett.

Dept. 310-3, Support Logistics: To support logistics supervisor, R. M. Williams Jr.

Dept. 322-1, Support Publications: To chief of support publications, G. R. Spitzer.

Dept. 531-2, Systems Test & Procedures-Engineering: To asst. design group engineer, J. F. Carberry.

Dept. 532-5, Material Lab-Engineering: To test lab group engineer, W. M. Gross.

Dept. 547-3, Component Test Equipment-Electronics: To electronics group engineer, B. A. Penners.

Dept. 549-7, Land Lines-Electronics: To design group engineer, D. G. Wilson. To asst. design group engineer, J. A. Hughes.

Dept. 578-1, Test Engineering: To flight test group engineer, P. V. Meyer.

Dept. 591-3, Engineering-Flight Simulation & Computers: To research group engineer, R. D. Horwitz.

Dept. 595, Engineering-Development: To structures group engineer, W. C. Jungemann. To dynamics group engineer, K. Kachigan. To research group engineer, D. M. Paff, E. W. Schwartz, R. S. Wentink. To asst. research group engineer, E. E. Frost.

Dept. 731-0, Machine Shop: To asst. foreman Gr. V, R. W. Calvert.

Dept. 732-0, Sheet Metal: To foreman Gr. III, D. W. Keaton.

Dept. 771-0, Mockup Proofing, Primary and Final Assembly: To asst. foreman, Gr. III, F. B. Presley.

VANDENBERG AFB

Dept. 576-6, Convair Operations: To asst. foreman manufacturing control, R. D. Vakoc.

Service Emblems

ASTRONAUTICS

Service emblems due during the period Jan. 16 through Jan. 31:

Fifteen-year: Dept. 541-3, E. A. Langsang; Dept. 573-3, R. T. Bernal.

Ten-year: Dept. 220-2, Zola B. Cruger; Dept. 541-3, J. A. Nelson; Dept. 545-3, W. R. Benton Jr.; Dept. 771-0, H. M. Clingingsmith, J. B. Jesson.

VANDENBERG AFB

Service emblem due Jan. 17:

Ten-year: Dept. 576-3, E. R. Steele.

Personals

ASTRONAUTICS

I wish to express my sincere thanks to all my Convair Astronautics friends for their condolences and expressions of sympathy on the passing of my wife, Dawn, on Dec. 17.

Don Schneible, Dept. 344

A special thanks to all my Astronautics friends for their thoughts, their gifts and their prayers. Their kindness has made my confinement at Scripps Memorial Hospital an easier one.

Betty Mae Desjardins, Dept. 521-7

Births

ASTRONAUTICS

MORDELL—Daughter, Janet Louise, 7 lbs., 14 1/2 oz., born Dec. 3 to Mr. and Mrs. Edward J. Mordekk, Dept. 756.

STEELE—Son, Lawrence Noel, 6 lbs., 14 oz., born Dec. 25 to Mr. and Mrs. Richard N. G. Steele, Dept. 322-9.



RARE SIGHT—Never before have this many key test personnel for Astronautics been together at one time. At right is W. W. Withee, assistant chief engineer-test. Standing behind are: P. T. Gardner, manager, Sycamore Canyon; P. J. Lynch, chief of field test; J. S. Harrison, test group engineer; T. L. Maloy, chief test conductor, AFMTC; B. G. MacNabb, manager of Convair facility, AFMTC. In front are: Don Waters, test conductor, Vandenberg AFB; K. E. Newton, chief test conductor, Sycamore; and W. F. Miller, manager, Vandenberg AFB. Missing are K. W. Jeremiah, manager, and Tommie Zannes, chief test conductor, of MSTS.

Frills, Flannels' Theme For Feb. 12 Style Show

"Frills and Flannels," will be the theme at the Feb. 12 spring and summer fashion show planned by the Astronautics CRA Women's Council.

The event, slated to take place at 8 p.m. in Astro's modern reception center (Bldg. 2), will feature fashions for the entire family.

Nearly 30 models, men, women and children, are slated to show a variety of wardrobe items for all ages. Sponsoring firms include members of the Clairemont Square (North) Merchants Association.

Molly Morse and Al Schuss will share commentary duties.

Astro's Women's Council staged a highly successful show at the same location before a capacity crowd last fall.

Tickets will go on sale Monday (Jan. 26) at all employee services outlets. They are \$1 each. However, only 500 will be sold.

"Many were disappointed when tickets sold out early for the last show," said Jean Bry-

Talented Performers Sought For Show

Talented Astronautics employees or members of their families are being sought by CRA for a prospective April show under the sponsorship of CRA's women's activities.

"We need men, women and children who have special talents for singing, dancing, specialty acts, etc.," said Jean Cassidy, secretary of the CRA Women's Council. "We also need skilled help in directing, writing and staging."

Those interested in taking part are asked to contact Alma, ext. 1111.

Present plans call for auditions and rehearsals to begin in February.

Astro Collectors To Convene Tonight

Astro coin collectors will gather tonight (Jan. 21) at the Astro cafeteria for a 7:30 p.m. meeting.

Joe Garside will present a special film on "Coins of the Colonial Group." R. S. Rogers will speak on coin collecting and Ray S. Toy, club president, will show his prize-winning exhibit from the San Diego County Fair.

The meeting is open to all employees and members of their families, including juniors.

Three door prizes were awarded at the group's December meeting. They went to Jean Garside, T. Scott and H. L. Jensen Jr.

ENGINEER TO SPEAK

R. E. Johnson, senior electrical engineer at Astronautics, will discuss "Gyros for Missiles and Aircraft" at the Jan. 22 meeting of the American Institute of Electrical Engineers.

Golf Sweepstakes Schedule For All of '59 Established

A complete schedule of golf events for the remainder of this year was made public for the first time this week at Astronautics by Art King, CRA golf commissioner.

"Increasing difficulty in reserving starting times makes it necessary for us to establish a yearly schedule well in advance," King said. "We have had to make reservations at courses that will accept groups as large as ours."

In addition to regular monthly sweepstakes events and special tournaments, Astro golfers will participate in several other activities. On April 19 teams from Astro, San Diego and Pomona will meet at Gilman Hot Springs for inter-division matches, then repeat these matches May 24 at Circle R Ranch.

Present plans call for repeating the popular Astro twilight league play this year. Action will start shortly after the beginning of Daylight Savings time.

Here are the regular monthly sweepstakes:

Feb. 7 and 8 at Bonita.
March 7 and 8 at Circle R.
April 11 and 12 at Balboa Park.
May 2, 3, 9 and 10, San Diego Industrial tournament at Torrey Pines.

June 7, 14 and 21, Convair Golf Club Championship at Torrey Pines, Flying Hills and Rancho Santa Fe.

July 11 and 12 at Flying Hills.
Aug. 8 and 9 at Caliente.

Sept. 13, 20 and 27, Astronautics championship at Caliente and Bonita.

Oct. 10 and 11 at Flying Hills.
Nov. 7 and 8 at Rancho Santa Fe.

Dec. 5 and 6 at Torrey Pines.

Astronautics golfers who are members of the Convair Golf

Club, an organization made up of all local Convair golfers, will take part in several tournaments during the coming year. Here is a complete Golf Club slate of events:

Feb. 21 and 22 at Balboa Park.

March 21 and 22 at Caliente.

April 4, 5, 11 and 12, Yater Memorial Championship at Flying Hills and Rancho Santa Fe.

May 2, 3, 9 and 10, Industrial at Torrey Pines.

June 7, 14 and 21, Club Championship at Torrey Pines, Flying Hills and Rancho Santa Fe.

July 25 and 26 at Circle R.

Aug. 22 and 23 at Torrey Pines.

Sept. 13, 20 and 27, Astro Championship at Caliente and Bonita.

Oct. 24 and 25 at Rancho Santa Fe.

Nov. 21 and 22 at Flying Hills.

Dec. 19 and 20 at Bonita.

★ ★ ★

STARTING TIMES

Starting times for the Feb. 7-8 sweepstakes planned by Astro golfers at Bonita are now being taken. Call Bunny, ext. 1111, before Feb. 5.

Golfers Find Links Tricky

Rough greens at Flying Hills took their toll of Astro golfers during the Jan. 10-11 meet. Lowest round shot was a six-over-par 78 that gave gross honors to Wayne Boring.

In the 0-12 handicap bracket behind Boring were W. E. Wray with an 80 and Jack Maughmer with an 81. Low net honors went to Bob Jellison (80-12-68), Gordon Woods (81-11-70) and G. B. Bagoloff (83-10-73).

John Sentovic paced the 13-19 group with an 81, trailed by Frank Cooke with an 83 and Jud Kenney with an 87. Lou Elfers' 81-17-64 won low net followed by Dave Merriam (83-16-67) and Hank Crauthamel (87-17-70).

In the 20 and up race J. K. Davant came through with a 90 with John Mowatt carding a 92 and Don Campbell a 93. Gerry Schmidt turned in a 93-24-69 for low net, just ahead of Tom Stark (101-31-70) and Red Smith (101-30-71).

Ski Photographer Will Show Movie

John Jay, one of America's foremost ski photographers, will present a special film "White Flight" at a jointly-sponsored affair of the Astro and San Diego Ski Clubs.

The presentation, with Jay narrating, will take place at 8 p.m. Feb. 3 at Hoover high school auditorium. It will include a 100-minute film of some of the world's foremost ski areas.

Tickets, now available at employee services, Bldg. 8, sell for \$1 each, a savings of 50 cents over normal prices.

Astro Pistol Club Announces Winners

Dave Reichenbacher (Dept. 130-1) paced Astro Pistol Club members at the January shoot by coping the master class of the .22 Police event.

Other winners were: expert class, Ken Bunker (Dept. 131-1); sharpshooter, Ralph Crosley (USAF); and marksman, Joe Miller (Dept. 771). Reichenbacher also won the short National event followed by Crosley and Bunker.

Nicholas Honored As Diver of Year

Bob Nicholas has won honors as "Diver of the Year" for the Astro Divers. He also took top spot at the January spearfishing meet. Joe Walker placed second and Derek Walton third.

Named to represent Astro in the Feb. 8 A.A.U. Winter Dive were Nicholas, Walker and Wes Kauder with Walton as alternate.

Pros to Address Golf Club Meeting

Two of the top golfers on the pro circuit, Billy Casper and Mike Souchak, will be guest speakers at a dinner meeting of the Convair Golf Club Jan. 30, 6:30 p.m., in the Lafayette Hotel, 2223 El Cajon Blvd.

All members, both regular and prospective, are invited to attend with wives or guests. Tickets for the event are priced at \$3 each.

The following Astronautics people are handling tickets: Hal Purnell, ext. 1313; Tom McCollach, ext. 1241 and Art King, ext. 1748.

BRIDGE PLAYERS SLATE MEETINGS

Astro bridge players will hold meetings Jan. 29 and Feb. 12-26 at Barcelona Bridge Club, 4th and Juniper. The Feb. 12 session will be a master points tournament night.

CRA Sports & Recreation Convairity

Annual Keg Tournament Will Start March 7-8

Convair Astronautics will hold its first annual bowling tournament over the first two weekends of March, according to word this week from Jack Boyle and Willard Brassell, CRA commissioners.

The March 7-8 and 14-15 affair will be held at Clairemont Bowl with competition slated throughout the day.

Brassell and Boyle outlined rules to govern the keg tournament which is expected to draw one of the largest fields of bowlers ever assembled for a company-sponsored bowling meet in San Diego.

Participants must be sanctioned bowlers and official averages from the 1958 book will be used. When no average is available, highest averages for 21 games will be used. Otherwise, assumed averages of 200 for men and 160 for women will be observed. Maximum team average will be 850, while the maximum doubles will be 369.

A handicap of two-thirds will prevail. That is, two-thirds of 1,000 for teams and 200 for individuals.

Eight Added to CRA Council

Eight new commissioners to head specific CRA activities at Convair Astronautics were named this week by Dick Mitchell, employee services chief.

They are: Clyde Burkhardt (physical culture); Herb Hawthorne (fishing); Art Munson (chess); Herb Boynton (skin divers); Ken Rinker (camera); F. W. Augustine (riding); Bob Weaver (snow ski); and Bill Geopfart (pistol).

Now serving as commissioners are: Jack Boyle and Willard Brassell (bowling); Larry Chambers (tennis); Ezra Johnson (gun club); Art King (golf); Bill Recktor (sports cars); Al Stone (archery); and Marty Stutz (square dancing).

Representatives at large are: Jean Bryan, Paul Callahan, Bob Carr, Bill Connelly, G. M. Coole, Bill Dawsey, Joe Frivaldsky, Ray Mendoza, John Sentovic, Bob Craft, Jim Conklin, Bill Johnson, Ed Dodero and Bryan Weicker-sheimer.

Get Tickets Now For 'Happy Millionaire'

Astronautics CRA has purchased the bulk of tickets for the Jan. 31 matinee (2:30 p.m.) performance of the current Old Globe production of "The Happiest Millionaire."

They are available to employees at a two-for-one rate. That is buy one ticket at the regular rate, receive another free, compliments of CRA.

Tickets are being offered on a first-come, first-served basis at employee services, Bldg. 8.



FORMULA K—Racing on Astronautics parking lot Dec. 21 were these "Formula K" vehicles, also known as "Go-Carts" and "Bugs."

Fifteen Cage Teams Carry Astro Colors

Fifteen basketball teams have moved into action at Convair Astronautics, three are engaged in outside competition, 12 are taking part in Astro shop leagues.

Astro's entry in the tough City league opened play by dropping a 66-65 thriller to Collas Merchants, then coasted by California Electric 83-73 and Old Town Tamale by 71-43.

Astro fielded a Metro league team called the Satellites without benefit of practice. The Satellites beat Seven-Up 38-19, then lost to Pioneer JV by a 44-30 count. The Astro Rockets blasted Rohr 58-43 in the Industrial league, then lost a close 45-43 encounter with Ryan.

Transportation and Development took the lead in the Wednesday shop league over the first two weeks of play. Transportation beat Launch Control by 34-27 and Propulsion Development by 34-21. Development topped Dynamics 20-17 and Handling Equipment by 29-28. The latter team bettered Dynamics by 25-20. Launch Control beat the same team by 35-15.

Test Data won a 30-27 game with Stores, Computers beat Standards Lab by 24-11 and Systems Lab edged Sycamore Canyon 15-14 in the initial Friday loop action.

Astro Has Full Dance Schedule

There is a course for every member of the family in a new round of CRA-sponsored dance classes announced this week at Convair Astronautics.

These sessions are offered to Astro employees and their families at greatly reduced rates due to CRA sponsorship. All are conducted at the McGrath Dance Studio, 1322 Fifth Ave., downtown. Instructors are Bill (Dept. 150) and Grace McGrath and other members of their staff.

Courses are normally offered only twice each year, shortly after the first of the year and in the fall.

First class of the spring session gets under way at 7:30 p.m. Friday (Jan. 23). It is a Latin dancing class and will include brush-up on various Latin dances and then whatever instruction the class desires.

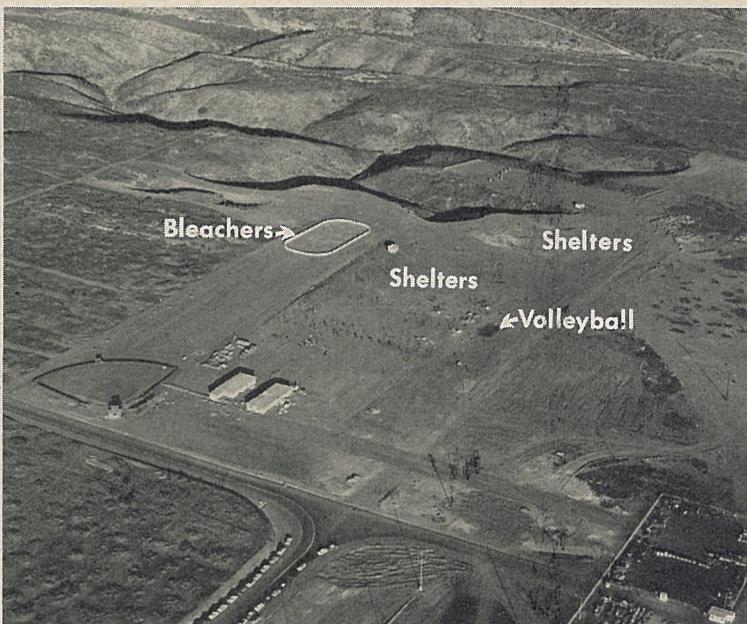
Jan. 24 at 10:30 a.m. the "little tots" take over for tap, ballet and acrobatic instruction.

Jan. 26 at 7:30 p.m. and Jan. 27 at 8:30 p.m. have been reserved for adults who desire a beginning ballroom class.

Jan. 28 at 8 p.m. is for teenagers interested in ballroom classes. Following these sessions, those desiring may stay for a supervised dance party.

JAYCEE OFFERING SHORTHAND CLASS

Astronautics employees may be interested in an intermediate shorthand course being offered by San Diego Junior College beginning Feb. 5 at Kearny high school. Students may enroll at that time in Room 142. Class hours are 5:15 to 7:45 on Tuesdays and Thursdays.



DEVELOPING—CRA area near Astronautics plant continues to show progress. In photo, locations of picnic shelters slated to be built soon are shown, as well as new volleyball court. Bleachers will be added to horse show ring.

Astro Getting up Steam In Developing Play Area

After several weeks of "holiday laxity" Astronautics CRA this week gave the signal for "full ahead" again in development of the recreational area adjacent to the new Astro plant.

One of the key aims is to have the area in shape for family and group picnic activities during the spring and summer months.

Much has been done toward this end, but much remains. For instance, five barbecues have been built out of a planned 22 to dot the area. Each is about seven feet long by three feet wide with a concrete foundation, tile top, large grill and storage area for fuels. Eventually each will be covered by a weather shelter.

For larger groups two picnic shelters are being pushed toward completion. Dept. 772 is handling work on one and tooling departments are building the other. Each will have a concrete floor, rest room facilities, plus room for larger-scale parties.

Many trees have been planted and are growing nicely. Much of the rocky surface has been cleared away in preparation for top soil.

Being pushed at present are two clubhouses in which to hold CRA group activities. They are being refurbished. And crews are now working erecting bleachers for a horse ring and Little League ball park.

One point stands out in the entire operation—all work is being done by volunteers, men and women who are helping CRA rush development of the family play area by cutting labor costs.

Plans are to continue the CRA policy presenting "Effie" awards to those who put in 20 hours of work in the area. Awards are engraved with the recipient's name and each contains a missile statue, plus ash tray.

Since so many departments have taken over specific jobs in the area, CRA has revised its weekend work schedules to fit the changed situation.

CRA Discount Tickets

The following discount tickets and items are now available through employee services outlets.

DECALS—Astronautics window decals, 10 cents each.

DISNEYLAND—Membership cards for Magic Kingdom Club allowing ticket purchases at reduced rates are available.

MARINELAND—Tickets in all price ranges with savings of 50 cents each.

OLD GLOBE—Tickets for Jan. 31 matinee of "The Happiest Millionaire" available at two for the price of one.

SAN DIEGO OPEN—Savings of \$1.50 per ticket to employees for the Jan. 28-Feb. 1 PGA golf tournament at Mission Valley Country Club.

SPACE PRIMER—An Introduction to Astronautics, 10 cents a copy.

Here's how it works:

If an employee is working in one of the departments that has an assigned job, he or she is asked to join the departmental effort. Supervisors in each department know who is in charge of work assignments. On the other hand, if the employee's department does not have an assigned job, he may contact CRA at ext. 1111 stating what day he can work. CRA will then arrange for a job.

The following departments are now sending work forces into specific areas on most weekends: 130, 220, 270-280-290 combined, the standards laboratory of engineering, 771, 772, 756 and 758.

Memory Class Response Big

Response to a special memory course under sponsorship of the Astronautics CRA Women's Council has been so great that CRA is making arrangements to hold two classes instead of one.

Some 140 persons have signed up for the classes to be taught by Donald Robinson. They will be divided into equal sessions of 70 each. First class will be at 7 p.m. Jan. 28. The second will be at the same time Jan. 30. Both will be staged in the Astro executive dining room.

While these classes are full, CRA will take the names of other employees wishing to attend on a reserve basis. Should original class members drop out, names will be added from the reserve list. Call Joyce at ext. 1111 to be added to the reserve list.

ROCKHOUNDS VISIT GOLD ROCK RANCH

Forty-five members of the Astro Rockhounds traveled in 13 cars to a long New Year's campout and gem hunt staged at Gold Rock Ranch on the lower Colorado River.

In addition to seeking better grades of agate, the group paid an extended visit to an old ghost town and gold mine.

Viola and Ray Beard presided at a special campfire party held New Year's night. Future trips were discussed.

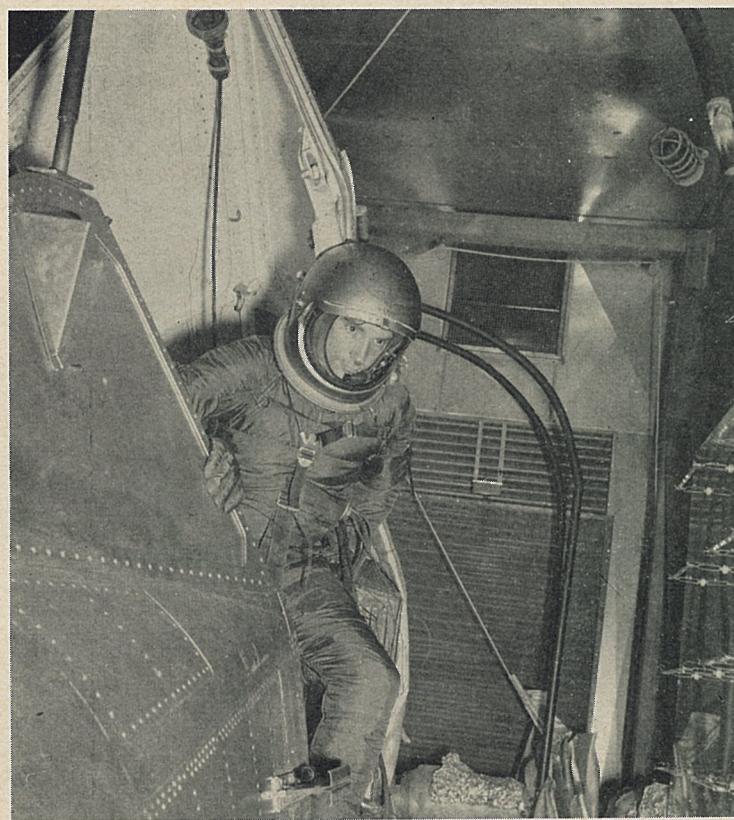
The group is planning another group excursion in February.

Badminton Play Starts Feb. 21

First full-scale badminton tournament at Convair Astronautics has been set for Feb. 21 and 22.

Entries for the competition to be held at the Balboa Park Gym close Feb. 13. Three separate classes, A, B, and C, are planned. Mixed singles and doubles events will most likely be held.

Entries should be phoned to Bunny, ext. 1111.



SPACE SUIT—T. R. Hannelly (Dept. 6), volunteer "pilot," climbs from cockpit in pressure suit under test for use in extremely high speed space vehicles.

Stress of Space Travel Simulated in Lab at SD

Design of the space vehicle to take the first man into outer space and the type of garments he will be wearing may be strongly affected by two Convair-funded research programs now in progress.

In its final stages is an acceleration study to test a theory of Dr. R. C. Armstrong of Convair SD's aviation, space and radiation medicine group that stresses produced on humans during exposure to high acceleration can be decreased by increasing the pressure of the air he is breathing.

During the experiment, conducted in the human centrifuge lab at the University of Southern California, humans are subjected to simulated "G" stresses that must be endured by occupants of space vehicles while attaining speeds of up to 18,000 mph—rate necessary to put the space machine of the future into orbit.

Results of the study, now nearly completed, have substantiated the theory, said Dr. Armstrong.

"The information obtained will serve as guides in the design of space vehicle environments," explained Dr. Armstrong. "Application of these principles can significantly affect the ability of space pilots to tolerate the combined stresses of space flights and thus increase the safety of the man and his mission."

In a second research program under way in the dynamics laboratories at Convair SD, Plant 1, Dr. Armstrong's aviation medical group is combining with engineering's human factors under Dr. E. G. Aiken to study the ability of man to tolerate extreme temperatures with and without special protective garments.

Convair volunteers are sealed into a cockpit in a special heat chamber for study of physical and psychological reactions to temperatures simulating reentry into the earth's atmosphere or a Mach 5 dash of a very high performance aircraft.

Air temperature in the cockpit is raised from 80 degrees F. to 200 degrees in 19½ minutes; kept at 200 degrees for six minutes, then brought back to 80 degrees in another 19½ minutes. Refrigeration equipment, capable of forming three tons of ice in a day, blows cold air at minus 13 degrees F. to reduce the temperature in the few minutes of time.

During tests the chamber temperature is kept at 285 degrees F. by an infrared light bank of 40,000 watts supplementing the electrical heating system.

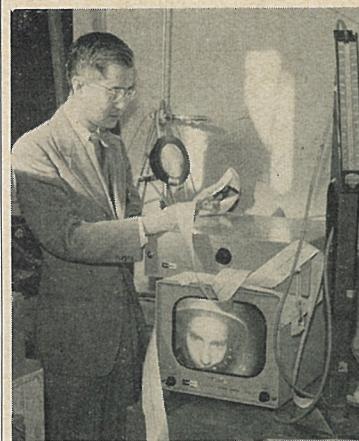
As the cockpit heats up, cool air is used to ventilate the special type of pressure suit, now under study, to maintain a normal body temperature of 98.6 degrees F. The pilot has his own filtered and refrigerated air supply piped

directly to him.

While the pilot is subjected to intense heat conditions, he must concentrate on a tracking problem—chasing a random dot on an oscilloscope and bringing it to center by manipulation of the controls, said to be more sensitive than those of an actual plane.

During tests, which last 45 minutes at a time, environmental temperatures, body temperatures, psychological reactions are recorded on instruments in a control room adjacent to the test chamber. Blood pressure, respiration, electrocardiogram, heart rate of the subject "pilot" is checked every three minutes by remote control.

Reactions of the subject are closely monitored by means of a closed circuit television with either Dr. Armstrong or Dr. W. L. S. Wu of the aviation medical group in close attendance. Tests are initiated by the human factors group and conducted in cooperation with the dynamic laboratories which provide testing facilities.



ON TV—Dr. W. L. S. Wu of SD aviation medicine group checks subject's physical condition during tests by graphs and closed circuit television.



CONTROL CENTER—Human factors and dynamics lab personnel, left to right, E. N. Hunter, R. H. St. John (in rear), L. J. Father, and W. H. Hanlon, record reactions on instruments in room adjoining test chamber.

Convair Radio Hams Link Families With Crews on Alaska Expedition

Convair Fort Worth and Air Force people taking part in "Operation: Raw Deal" at Eielson Air Force Base in Alaska are settling down to a long, cold winter of testing.

This is probably the coldest winter for most of those involved in the B-58 test project. Temperatures are ranging from a minus 40 to 47 degrees below.

H. A. Dunlavy, customer service representative, has started sending weekly progress reports back to Convair Fort Worth. Reports include everything from what happened and why to comments and recommendations, photos and sketches.

Major K. K. Lewis, Air Force project officer, said that his B-58 flight to Eielson was uneventful and that the B-58 autopilot was the best that he had ever flown.

Max Schelper, CRA radio commissioner, says that CRA amateur radio traffic is going strong between Fort Worth and Eielson.

He says at least three to four messages a night are being handled for Fort Worth families whose husbands and fathers are busy with the project.

Schelper says that the record number of messages handled in one night thus far has been 18.

Radio communication, which started back during the Christ-

mas holidays, will be continued until the project is over in March. Any family which wishes to communicate with Convair people in Alaska may contact Schelper at ext. 3503.

"Operation: Raw Deal" is an Air Force project in which the B-58 and its sub systems are being tested under various Alaskan cold weather conditions.

* * *

An F-106A has been at Eielson AFB the last month for similar cold weather tests, arriving there Dec. 22.

Testing of the plane and ground support equipment in severe cold weather conditions is expected to continue until March.

Convair SD men on duty during the Alaskan test program are Dave Johnson, field service engineer acting as Convair's technical assistant; W. D. Nowell, in charge of ground support equipment; and E. P. Griesell, spare parts.

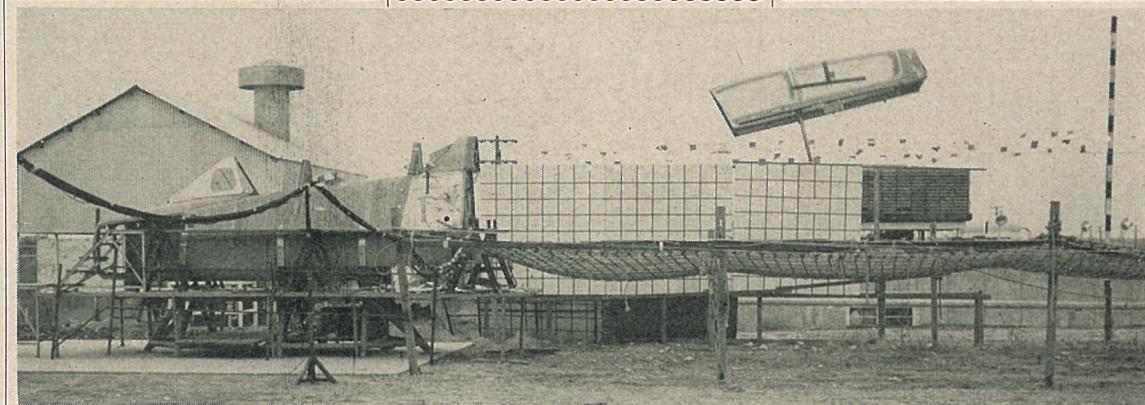
Convairity Serves A Pleasant Purpose

A Convairity staff member was straightening papers at San Diego on a recent Convairity distribution day when a passing supervisor said:

"Paper day! That always makes me happy."

"Glad you like it," replied the staffer, pleased at first but then deflated by:

"Yep, reminds me I get paid this Friday."



ALLEY, OOP!—F-102 canopy sails through air after ejection mechanism is fired during tests at Fort Worth. Canopy plummets into sturdy net and is recovered for re-use.

Canopy Blast Tests Involve B-58, F-106B

Convair Fort Worth test engineers are blowing their tops these days—all in the interest of safety for crews flying TF-102s, F-106Bs and B-58s.

But the tops they blow are not their own. They're the canopies on the jet aircraft built at Convair San Diego and Convair Fort Worth.

To make the tests, engineers set up a nose section on a test rig in the west test area near the north end of the Convair FW reservation.

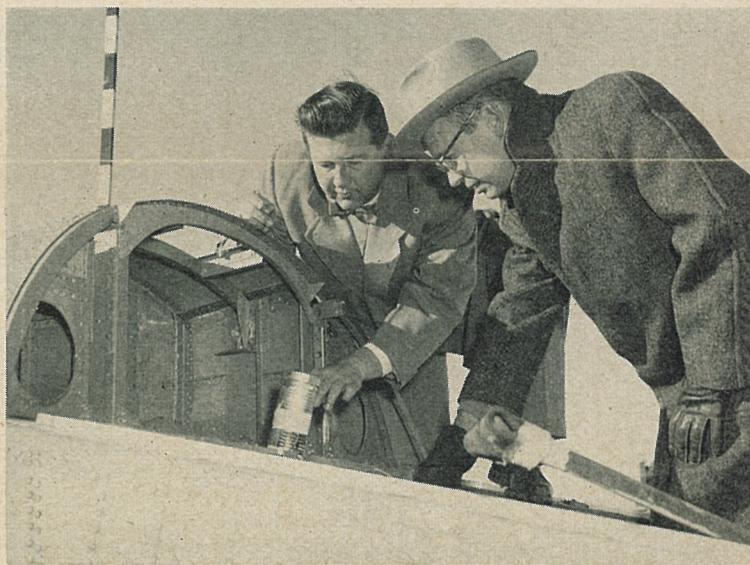
Instrumentation is installed to gather data on the functioning of everything vital to a proper ejection of the canopy.

Then begins the count-down over a loudspeaker which can be heard throughout the test area—and which warns everyone in the vicinity that the canopy is about to blast off.

Ed Allen, who serves as fire control engineer, stands before an instrument panel inside the control room, a microphone in his hand.

"Thirty seconds to blast-off," his voice booms over the loudspeaker. "Twenty seconds, 10 seconds . . . five, four, three, two, one . . . fire!"

The canopy blows off with an ear-splitting crack like a shot



POST MORTEM—John E. Hickok, right, senior test engineer, and E. L. Roper examine actuator-remover in cockpit of F-102 after ejection test.

from a B-58 cannon—sails gracefully end over end through the air—and lands with a plunk in a rugged net made of interlaced one-inch rope.

As all this goes on, cameramen from the photo lab are shooting photos, both movies and stills, to record exactly what happened.

Canopy ejection tests at Convair Fort Worth are covered and recorded with high speed Fastax camera of same type used in San Diego to photograph 600 mph hailstones (Convairity, Nov. 26).

F. E. Carlile, photography assistant supervisor, said film can race through the machine at speeds up to 140 miles per hour to give an ultra slow motion effect when projected.

Purpose of all this is to make certain that the canopy is blown clear of the aircraft in such a fashion as not to endanger a pilot or other crew member who may be attempting to escape from the airplane.

Even though the F-106B is being produced at San Diego, canopy testing is performed at Convair Fort Worth because the nose section was designed by FW engineering and built at Fort Worth. The sub-contract also calls for testing of items designed at Fort Worth.

Vital part in the canopy ejection process on the F-106B, used in the most recently performed tests, is the actuator-remover lo-

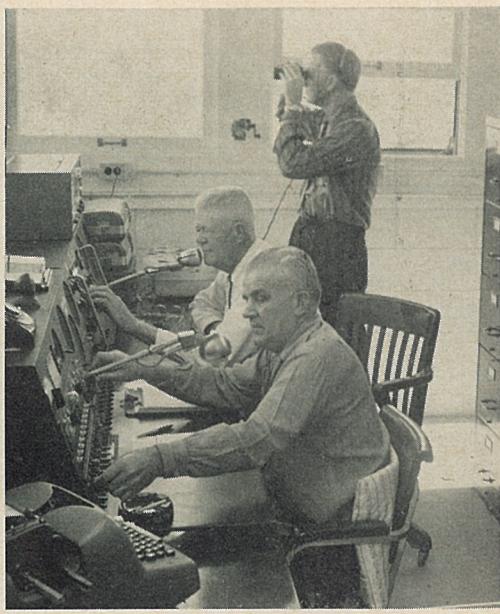
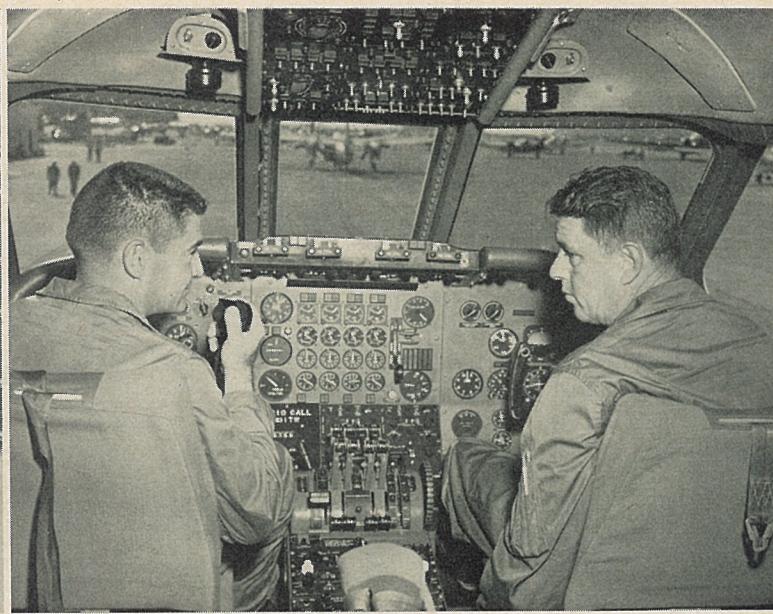
cated in the cockpit. When the pilot trips the control, the actuator-remover provides the force required to remove the canopy under all conditions and at supersonic speeds.

John E. Hickok, project test engineer, said that operation of the ejection system has been tested in temperatures ranging from minus 65 to plus 160 degrees.

"The actuator has gone through sand and dust tests at a number of temperatures," he commented. "It has also been exposed to a terrific salt spray and has even gone through fungus tests."



Reg. U. S. Pat. Off.
© 1959 by
News Syndicate Co., Inc.



EIGHT-OH-ONE—For more than an hour last week Convair's jet 880 was not only in the air but "on the air" too, as radio linked plane to shore stations during first flight. (Plane's call sign is "801-TW.") At left is R. L. Runnalls, director of 880 flight test, shown in data handling station in SD Bldg. 54 where data on

plane performance was telemetered. Center is 880 cockpit with Pilot Don Germaraad and Co-Pilot Phil Prophett. At right is Convair's radio station on Pt. Loma which was relay point. With binoculars is L. M. Jaquish of Dept. 98 who recorded transmissions. Radio operators are L. W. Passano and A. A. Baker.



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

Convairity

Vol. 12, No. 3

Wednesday, February 4, 1959

SAN DIEGO, POMONA AND ANTELOPE VALLEY, CALIFORNIA

Astronautics

EDITION

(Serving Astronautics Division of Convair)

Astro news office, Bldg. 2, new plant, ext. 1154.

DAINGERFIELD AND FORT WORTH, TEXAS



DOWN THE BEACH—Jet 880 comes in for landing at North Island Naval Air Station at end of first flight. In background is venerable Hotel del Coronado. Fishermen kept right on fishing!

Biron Honored for Community Service

R. H. Biron, Convair vice president-administration, was singled out as recipient of the first annual award given by the San Diego Chamber of Commerce for "the most significant contribution to community development" during the year.

Selected for the 1958 award for accomplishments of the C. of C.'s University of California committee, of which he is chairman, Biron was honored at the annual membership meeting Jan. 23 in the U. S. Grant Hotel.

Feb. 13 Deadline for Club Scholarship

Convair SD parents are reminded that the deadline is drawing near for registration of their sons or daughters for the Convair SD Management Club scholarship program.

Last date to submit applications and grade transcripts is next Friday (Feb. 13).

20 Qualified at SD for '58 President's Award

Presentation of the President's Award and Mug of the Year will highlight the Feb. 18 meeting of the Convair San Diego Management Club in the Caribbean Room of the El Cortez Hotel.

Convair President J. V. Naish will confer the cost reduction award on an individual whose identity will not be revealed until the meeting. (Twenty CIP contributors, each with more than \$25,000 savings to his credit, are in the running).

Mug of the Year is the top an-

nual award bestowed by the Management Club.

Main speaker of the evening will be Donald C. Mitchell, National Management Association member, who will present a talk entitled, "Creative Thinking."

Sponsors are manufacturing control, Plants 1 and 2, manufacturing development and process specifications departments. Members can obtain tickets from departmental representatives. Social hour starts at 5:30 p.m., dinner from 6:30 to 7:30.

Intensive Campaign in Prospect With Cost Reduction as Goal

An intensive drive to encourage all Convair SD employees to turn their money-saving ideas into cash is due to be kicked off soon.

"This year more than ever before we need the active participation of every person working in Convair in our cost-reduction program," stressed E. E. Hartzler, cost reduction supervisor. "Because of the increased complexity, and consequent increased cost, of all types of aircraft, the only way to improve the company's compe-

titive position is by reduction of manufacturing costs."

Total installed savings to the company of CIPs and Employee Suggestions during 1958 dropped \$700,000 from savings in 1957.

Only ten per cent of all flat-salaried personnel, or 597 individuals, submitted Cost Improvement Proposals during the year.

"Every person in Convair has at least one idea which could benefit both the company and

(Continued on Page 2)

880 Continuing Test Flights From Naval Air

Convair's first jet transport is well into its flight testing program this week following a highly successful maiden flight of an hour and 14 minutes last week (Jan. 27).

Making two runs over a pre-determined flight course which took it from Lindbergh Field out over the bay and ocean to Catalina Island and back to Pt. Loma, the white and gold bird awed thousands of people lining the runways and parked at points of vantage on the point.

The plane streaked off the ground at 10 a.m., exactly on time, and was traveling 165 mph when it lifted off, after using 4,000 feet of runway.

Bystanders opposite the takeoff point remarked on the lack of noise as the plane whizzed past, equipped with the "daisy-type" General Electric sound suppressors which will go on all 880s.

Piloted by Don Germaraad, chief engineering test pilot, and P. M. Prophett, assistant chief engineer, flight test, the sleek swept-wing plane climbed above 20,000 feet during the first flight and reached speeds of beyond 300 mph, about half of the cruising speed of 615 mph of which it is capable.

The T-33 Air Force chase plane was hard pressed to keep up with the giant 880 during its climb. Capt. J. B. Jordan of Edwards AFB piloted the T-33 and checked visually on the 880 exterior controls, etc., reporting to Germaraad by radio.

Settling down at North Island Naval Air Station at 11:14 a.m. "like a big white snowflake," as some spectator remarked, Germaraad brought the plane back to meet a crowd of more than 100

(Continued on Page 2)

PACE EXPECTED AT FEB. 25 MEET

Frank Pace Jr., president of General Dynamics Corporation, will head a management-studded group slated to take part in the Feb. 25 meeting of the Convair Astronautics Management Club.

The sponsoring industrial engineering department this week indicated invitations will be extended to all General Dynamics directors as well as top Convair officials.

The regular meeting is now planned for the Caribbean Room of the El Cortez Hotel.

Radio Chatter Tensely Tells Story of Flight

Eavesdropping on radio transmissions during first flight of the 880 brought a fascinating blow-by-blow account.

Here's what it sounded like:

9:55 a.m. "This is 567 . . . taking off." (567 was the call sign for the T-33 chase plane.)

9:58 "801 Tare William. Ready to roll . . ." (801-TW was 880's call number.)

10 a.m. (801-TW) "Everything looks good!"

10:01 a.m. (801-TW) "Am over Point Loma at 500 feet, chase plane in position."

10:02 a.m. (567) "Everything looks clean . . . am dropping back . . . can't keep up."

10:06 a.m. (801-TW) "At 17,000 feet northbound . . . routine."

10:11 a.m. (801-TW) "Leveling off at 20,000 feet 35 miles off San Clemente Island . . . routine."

10:13 a.m. (801-TW to 567) "Make right turn here . . . start back toward San Diego."

10:13 a.m. (567) "All right."

10:14 a.m. (801-TW) to 567 "Please check noise at right-hand side of plane."

10:14 a.m. (567) "Looks good . . . don't see anything to cause noise."

10:15 a.m. (801-TW to 567) "Pull in again . . . we're going to 200-knot point."

10:15 a.m. (567) "We read 205 knots."

10:15 a.m. (801-TW) "Roger."

10:19 a.m. (801-TW) "Are you feeling any atmospheric turbulence?"

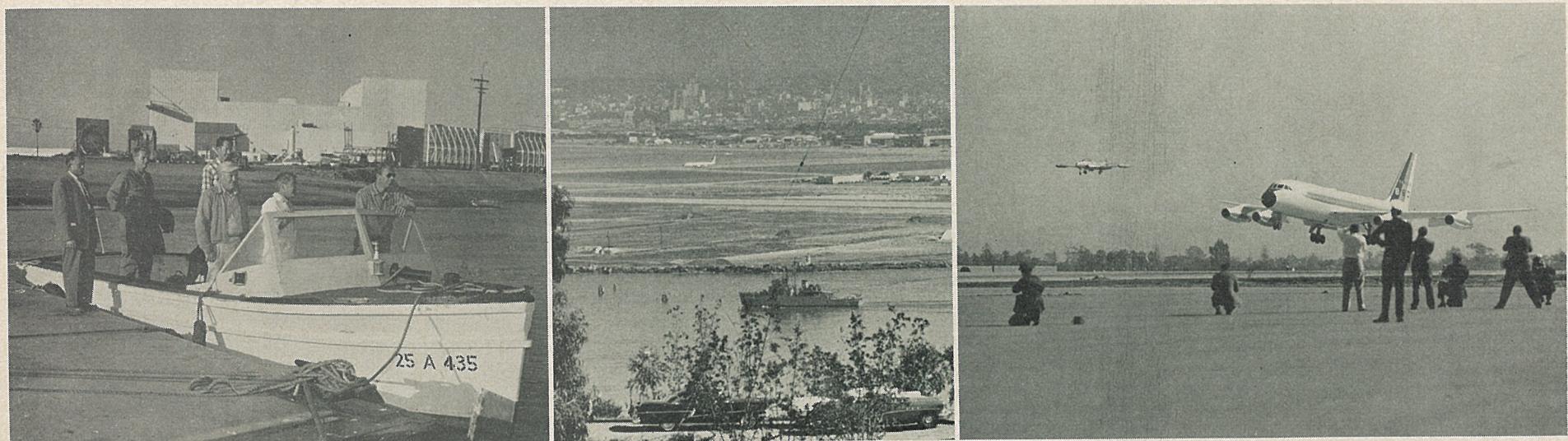
10:19 a.m. (567) "No, none at all, but will keep close check."

10:20 a.m. (801-TW) "What do you read?"

10:20 a.m. (567) "We have 162.5 knots."

10:23 a.m. (801-TW) "We're going to make a turn to right."

(Continued on Page 2)



ACROSS CHANNEL—At right is jet 880 at moment of touch-down on North Island and in center is how landing looked from Pt. Loma. Field operations crew embarks at left for trip across channel to service plane. A ground crew of about 75 are maintaining ship on two shifts.



HANDSHAKES—B. F. Coggan, SD Division manager, hands out 880 pins to flight crew as mementos of first flight.

Mrs. Chase to Head Exec. Secretaries

Catherine Chase, secretary to B. F. Coggan, Convair SD Division manager and vice president, was installed president of the San Diego chapter of Executives' Secretaries, Inc., at Jan. 20 ceremonies in the Mission Valley Country Club.

Mrs. Chase, who has been with the company for 17 years, is Convair SD's only representative in the group. A member since 1955, she served as program director two years ago and vice president during 1958.

She has been secretary to Coggan the last five years.



Catherine Chase

Astro Wives Club Forming

Formation of a Convair Wives Club under the sponsorship of CRA is being planned at Astronautics with the first meeting set for 7:30 p.m. Feb. 17 at the Astro cafeteria.

Following a successful pattern established at several off-site bases operated by Convair, the group would take part in various types of programs of general interest to wives. The group would function under the sponsorship of CRA's women's activities.

The Feb. 17 meeting will feature Mrs. Sandra Hudson, a professional hypnotist. There is no charge for the program and refreshments will be served.

Arrangements are being handled by Mrs. Cornelius Van Twuyver (BR-7-0520) and Mrs. William R. Walker (BR-3-1025). They would be glad to discuss details with prospective members.

Jet Airport Planning Will Be Discussed

"Acoustical Factors in Airport Planning for the Jet Age" will be the topic of tomorrow's (Feb. 5) session of the SD chapter of the Acoustical Society of America.

All interested Convair people are invited to the meeting in the Naval Electronics Laboratory auditorium at 7:30 p.m.

Kenneth Eldred of Western Electro Acoustical Co., expert on aircraft noise, will speak and lead discussion.

For further information call A. M. Small (SD-Dept. 6), ext. 1679, Plant 1.

Radio Chatter Tersely Tells Story of Flight

(Continued from Page 1)

10:23 a.m. (567) "All right." 10:24 a.m. (801-TW) "We're 10 miles offshore of Point Loma headed northward for second run."

10:29 a.m. (801-TW) "Will you pull in and give us another air speed check at this point?"

10:30 a.m. (567) "I got 163 knots."

10:32 a.m. (801-TW) "We're going down in speed to check buffet."

10:38 a.m. (801-TW) "We're five miles off Catalina Island at 19,000 feet."

10:39 a.m. (801-TW) "Checking gear operation . . . gear down, flaps 50, 113 knots."

10:45 a.m. (801-TW) "Had a little problem with gear . . . gear down and locked . . . will leave it that way until we get back to ground."

10:47 a.m. (801-TW to 440J, Convair plane carrying press to take aerial pictures) "440J, we will wait for pictures, then going down to island and land."

10:48 a.m. (567) "Right main looks o.k. . . left main looks o.k."

10:53 a.m. (567) "No hydraulic leaks visible."

10:55 a.m. (801-TW) "Five miles off Point Loma at 11,000 feet."

10:59 a.m. (801-TW to 440J) "I don't think you're going to make it, Bill. We're going to continue in right away."

11:00 a.m. (801-TW) "Ten miles offshore at Point Loma, 9,000 feet. Routine . . . heading in for North Island."

11:01 a.m. (440J) "Can't make it off . . . will not have time."

11:05 a.m. (801-TW) "Five miles offshore at Point Loma southbound at 5,000 feet."

11:09 a.m. (801-TW) "Half-mile off Point Loma, southbound."

11:14 a.m. — Touch-down at North Island!

Cost Reduction To Gain Stress

(Continued from Page 1) himself if it were turned in," said Hartzler.

Dollar savings from CIPs for 1958 were \$1,996,303 and from ESSs, \$490,021. Out of the 3,183 hourly employees submitting suggestions, 1,145 received awards.

Receiving the most cash during the year for their Employee Suggestions were: Lorrain D. Clark (Dept. 230), \$764.20; J. H. Parsons (Dept. 280), \$725.30; L. F. Pendarvis (Dept. 288-5), \$688.45; E. B. Kellogg (Dept. 192), \$626.60; B. J. Jarrell (Dept. 267), \$625.05; R. L. Lecuyer (Dept. 25), \$606.60; and T. S. Potts Jr. (Dept. 400-1), \$546.50.

Convair SD handed out \$59,637.20 in ES awards during 1958, a drop of almost \$20,000 from the year before.

"Convair would be only too glad to boost its award payments for more concrete suggestions on ways to cut costs," concluded Hartzler.

Ground Crews Ferried To NAS for 880 Work

(Continued from Page 1) press and officials.

Scheduled to be up for two hours, Germeraad shortened the first flight because of minor landing gear operation difficulties.

"Airplane performance and flight characteristics were exceptionally fine for a first-flight evaluation," Germeraad said. "The engines performed very well, with no trouble squawks whatever."

Over 50 SD engineering personnel and three General Electric field representatives listened in on Germeraad's in-flight radio comments via "Operation Eavesdropper," set up on the second floor of Bldg. 5 at SD.

Crowding Room 212 and the hallway outside the flight test control point which taped conversation received by telephone wire from the Pt. Loma communications center, SD people strained to hear every word passing between Germeraad and the T-33 pilot.

Plane No. 1's call letters were its registration number—N801-TW. All TWA 880s on order will carry the letters "TW" and the

Few first flights at San Diego ever drew the public attention that centered on the 880 last week. Spectator traffic was heavy on Pt. Loma and some school teachers (such as Maureen Doyle, second grade instructor at Coronado's Central Elementary) took their classes outside to catch a glimpse.

block numbers of 801, 802, etc., in sequence.

Said R. L. Runnalls, director of the 880 flight test program, "The entire flight operation was extremely well coordinated with the chase plane, communications and ground crew so synchronized that we were able to maintain constant contact and keep track of the progress of the flight every minute."

The maiden flight of the 880 was the first time a prototype Convair jet had made a first flight from Lindbergh Field since 1947 when the jet XB-46 was

flight tested.

The 880 will be at North Island during 10 hours of flight tests, George Putness, chief engineer of flight test, reported. This will take at least another week and three or four flights. It will then return to Lindbergh Field for

First 880-flight envelopes are now on sale at SD employee services, Plants 1 and 2, and the Bldg. 19 post office.

The envelopes, carried by the 880 on her maiden voyage, were cancelled at 11:30 a.m., Jan. 27, shortly after "touch-down" time. They are priced at 25c each.

most of the rest of the 14-month test program, with the exception of several weeks this summer when it will be at Edwards AFB for takeoff and landing tests.

A ground crew of about 75 from SD field operations are ferrying back and forth via Convair surface craft to maintain the plane on two shifts.

"The operation of the plane was sufficiently trouble-free so that a minimum of time was needed for a ground check of its systems in preparation for its next flight," Runnalls added.

The same crew that took the plane up for its first flight will continue on other test flights, with the possible exception that John Knebel may alternate with Prophett as co-pilot. Crew members are J. E. Moroney, senior flight test engineer; E. H. Davies, senior instrumentation engineer; R. M. Bloom and B. B. Gray, senior control engineers.

Wilkins Is Speaker At IRA Gathering

D. C. Wilkins Jr., manager of industrial relations at Convair San Diego, was the principal speaker at the annual installation dinner of the Industrial Recreation Association Jan. 31 at the El Morocco restaurant.

Gil Crosthwaite of the Convair SD Recreation Association was installed as vice president of the IRA which is composed of 26-member organizations in the San Diego area.



LEAVE TAKING—J. V. Naish, Convair president, right, chats with his new executive vice president, August C. Esenwein, during farewell dinner for latter in Fort Worth. Esenwein, former FW Division manager, has taken up his new responsibilities in San Diego.

Convairity

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations. General Offices, San Diego, Calif., Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

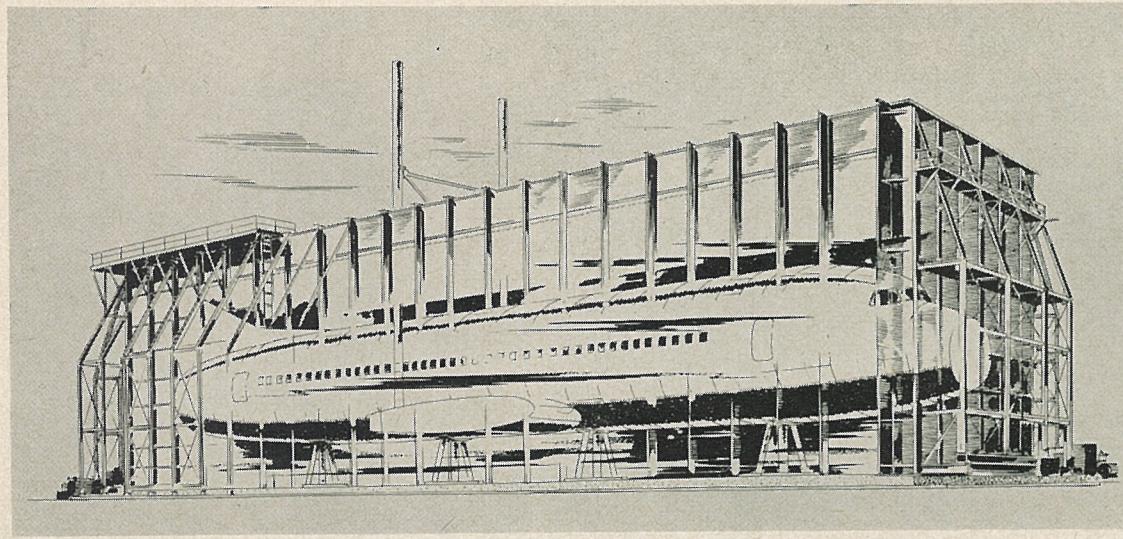
SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Gracey Fath, Helen Pemberton, Fred Bettinger.

Astronautics Editorial Offices, Bldg. 2, new plant, ext. 1154. Staff: Bryan Weickersheimer, news editor.

FW Editorial Offices, Col. 69C, mezz., ext. 2961. Mailing address: Convairity, Convair, Fort Worth, Texas. Telephone PErshing 8-7311. Staff: Bob Vollmer, news editor; Bobbie Sue Marr, Horace A. Baker Jr.

Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Offices, Room 31, Bldg. 301B, Palmdale, ext. 337. Staff: Betty Lou Nash.



SUBMERGED—Drawing of Convair 880 fuselage as it will look in large hydrostatic test tank at ramp for structural tests under water. Stub wings will extend out of tank sides through rubber boots.

Frogmen at SD Drill in Preparation For Underwater 880 Inspections

Three new "frogmen" have learned the art at Convair San Diego and several others have brushed up on their technique in preparation for going "down to the sea" with the jet 880.

They are preparing for underwater inspection and photographic duty come the time when an 880 fuselage will be completely submerged in a giant hydrostatic test tank at the SD seaplane ramp. Covering the test plane with water is part of an extensive pressure testing program destined to start soon.

In preparation for their wet working conditions, Obed Bobbitt (Dept. 6), engineer; Jerry Green (98-8), photographer; and Don Wood (Dept. 3-7) have completed a recent course in underwater training taught by Art Thomas (Dept. 25), Convair SD diver. Earl Moore and Bob Callahan, both of Dept. 31 and experienced divers, assisted with the instruction. (John Gillette of SD engineering was unable to finish the course because of an auditory infection.)

The 40-hr. underwater course on the proper use and maintenance of diving equipment was coordinated by J. B. Baker of educational services section.

The course, extending from early December through the second week in January, covered about nine days of actual training. Delays were caused by bad weather conditions and holidays, said Baker. Diving had to be held up at one point when a storm carried away part of the operating dock at the ramp.

The men were familiarized with the use of all equipment and underwater safety, before and during dives starting at 15-

ft. depth and increasing until they were "graduated" after deep-sea dives of 85 ft. in the open ocean. Men dived in pairs, staying down about 40 minutes to over an hour. While under water trainees were taught to remove and replace face plates and mouth pieces without swallowing water and even to leave their air tanks at the bottom, surfacing, then diving again to retrieve them.



IN YOU GO—Jerry Green hits water, sprinkled by splash created by John Gillette, who preceded him.

Except for Bobbitt, all of the men taking the course had had some previous underwater training or skin diving experience. He said that after becoming used to being under instead of on top of water that he thoroughly enjoyed it.

Bobbitt's duties in the 880 testing program will include diving into the tank several times a day to check the fuselage for failures and to record growth of any fatigue cracks and damage increase. Moore and Callahan will assist in the underwater inspection.

Don Wood of educational services will act as standby diver or safety man whenever needed.

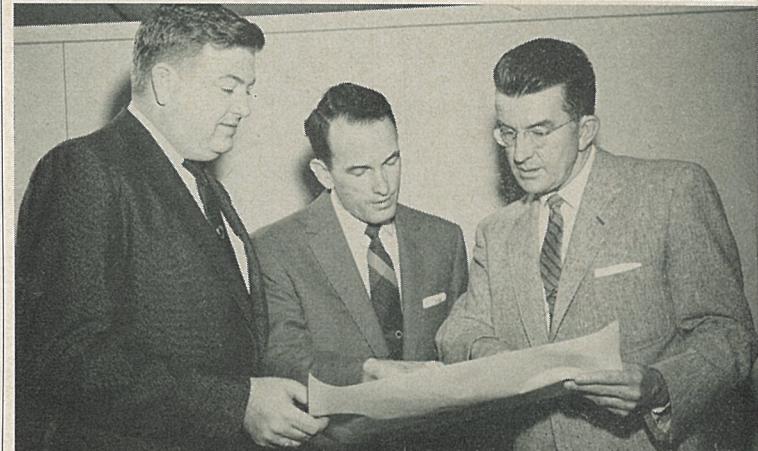
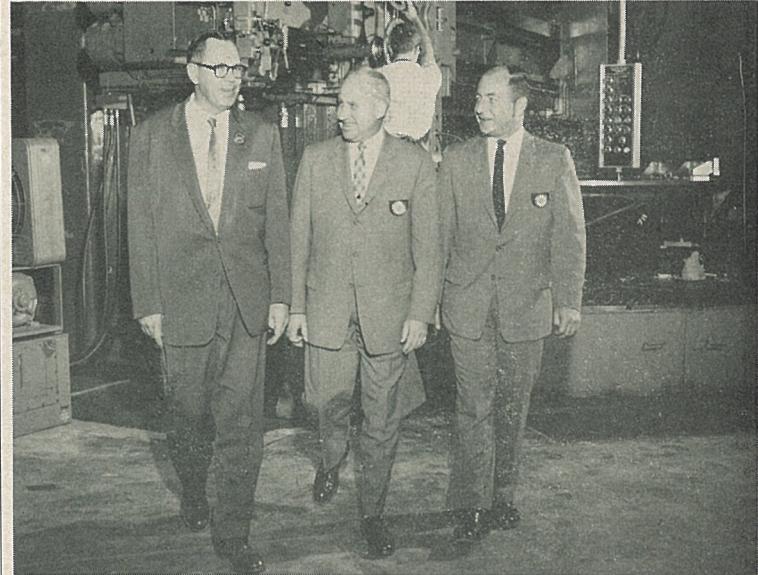
Green has been assigned to the project as motion picture section photographer to take a photographic record of the test results.

The cycle article (99-4) is due at the ramp this week with testing to start the latter part of the month. The hydrostatic test program will be conducted by the structural test lab with W. E. Wise, group engineer, assisted by A. R. Vollmecke, assistant group engineer, in charge of 880 tests.

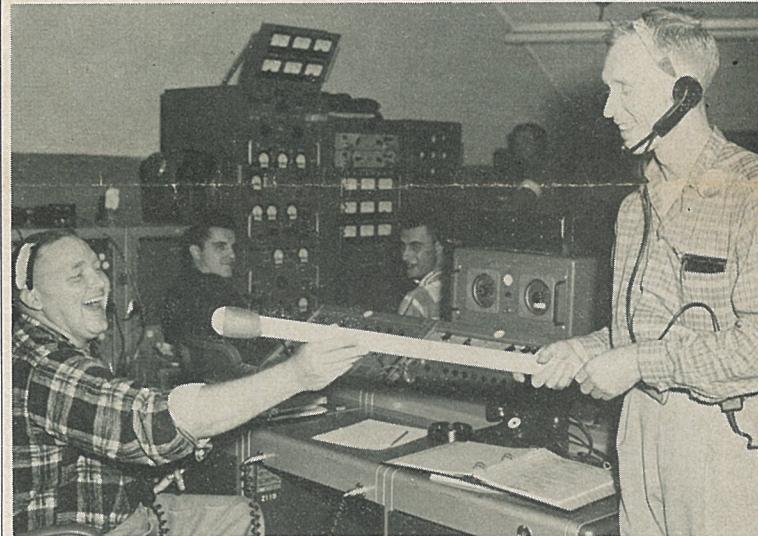
Maj. Don Kirkpatrick Wins Commendation

Maj. Don O. Kirkpatrick received the Commendation Medal recently from Col. Leonard R. Hall, Convair Fort Worth Air Force plant representative.

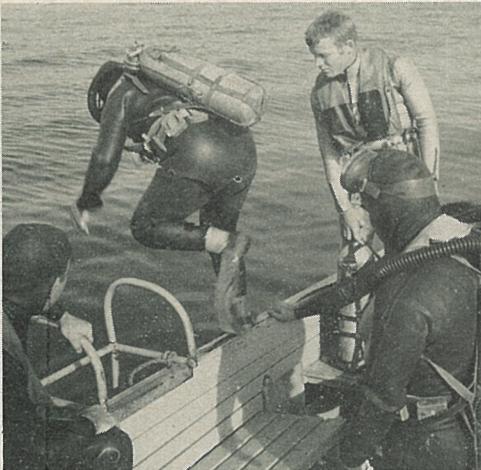
The medal was presented by direction of the Secretary of the Air Force for meritorious service as chief, engineering support division, at Convair San Diego from December 1956 to August 1958.



VISITORS—In top photo Larry Granstedt, Astro chief tool engineer, left, hosts Majors Gordon Palmer and Harold Wanfried during five-week assignment at Astro Division. They have been assigned to SD Division for some months under Air Force "Training With Industry" program. In lower photo Capts. T. L. Griswold and H. D. Clark, on year's assignment at Convair Fort Worth, are shown during brief visit to SD Division. At right is R. R. Hoover, SD assistant chief engineer.



"LIGHT" TOUCH—It isn't always solemn during Atlas countdown at Cape Canaveral. Here's comedy touch as Cal Fowler presents king-sized match to Wilford R. Jackson, test conductor, probably with some such wisecrack as "if it doesn't start when you press the button, try a match!"



SCHOOL FOR DIVERS—In lower center are principals in diver class recently completed at SD. Standing: Bob Callahan, Jerry Green, Don Wood, John Gillette. Crouched: Obed Bobbitt, Jesse

Baker (Dept. 3-7, course coordinator), Earl Moore, Art Thomas. Training was conducted in San Diego Bay off Convair seaplane ramp and in ocean off Pt. Loma.

Convair FW Engineer Wins Top IAS Award

Writer of the winning technical paper of the year, Convair Fort Worth's Joseph T. C. Liu brought home the 1958 "Minta Martin Award" from the annual winter meeting of the Institute of the Aeronautical Sciences in New York last week.

Title of Liu's paper (a mouthful in itself) was "The Laminar Boundary Layer Flow on the Axi-Symmetric Body with Traverse Curvature Effect." This same paper landed him the 1958 Student Paper Composition Award sponsored by the Texas section of IAS.

Born in Tientsin, China, Liu attended Michigan University.

More Appointments On F-108 Announced

Additional appointments to the F-108 wing program at Convair SD announced by B. F. Coggan, SD Division manager and Convair vice president, involve seven SD men.

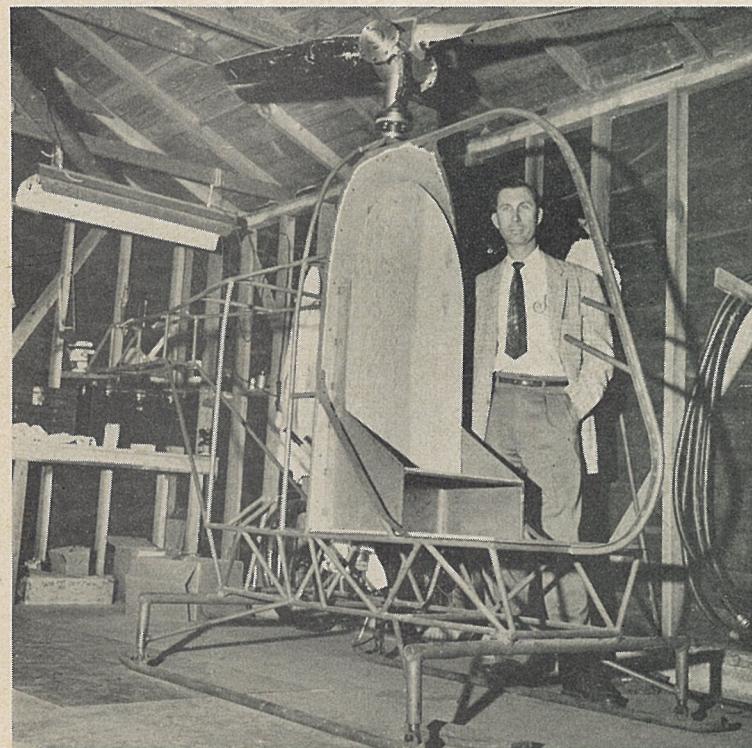
Forming the F-108 project team under W. S. Stroud are: J. E. Hughes, engineering; E. F. Monsees, material; C. W. Power, contracts; E. H. Schmidt, program control; W. P. Woods, tooling; F. L. Farrell, administration; J. J. Swarts, quality control.

Tool Designer Chooses Whirlybird To Beat Crowded Freeway Traffic

Unlike several million others in Southern California who fume over freeway traffic but put up with it, Convair Pomona's Max

Moldenhauer (Dept. 24) is doing something about it. He's building himself a helicopter.

When completed he expects the



WHIRLYBIRD—Convair Pomona's Max Moldenhauer (Dept. 24) is one person who is doing something about freeway traffic. He's building himself a helicopter. He has designed everything but power plant, which is 53 horsepower motorcycle engine, and expects to have bird ready for testing within next few months.

Winning Combination

Convair SD Father-Son Team Race 122 m.p.h. 'Dragster'

Take a 1932 Ford frame, add a transmission from a '39 Ford, power with a '56 Corvette engine, wrap the works with aluminum sheathing (acquired from the salvage yard at Convair SD) and you have what is known in "hot rod" lingo as a Class C "dragster".

And what do you do with a Class C "dragster"? You race it. You race it if you have enough nerve to sit behind the wheel and hurtle down a quarter-mile drag strip at 122.6 miles per.

A good driver would cover the quarter mile in 10.46 seconds. One such driver is Jim Heck Jr. of Dept. 25 at Convair SD.

Every other Sunday for the last six months at the Paradise-Mesa drag strip he has buckled himself into the harness of the racing driver and climbed into the "sling shot" seat located directly between the two rear "gum" tires. (Gum tires are without treads and used for faster starts on the track.)

After a few minutes of encouragement from his dad, Jim Sr., he draws the goggles over his eyes, peers up the quarter-mile strip, making a mental note to stay on his side of the white line (if he crossed it he would default), touches off the magneto ignition that brings the motor to life and tears away down the strip.

Race over, father (who also

works in Dept. 25 at Convair SD) and son review the car's performance, always trying to cut precious tenths of seconds off the elapsed time.

But they have cut the time as short as anyone in the Southern California area. To prove it they have a total of 42 trophies.

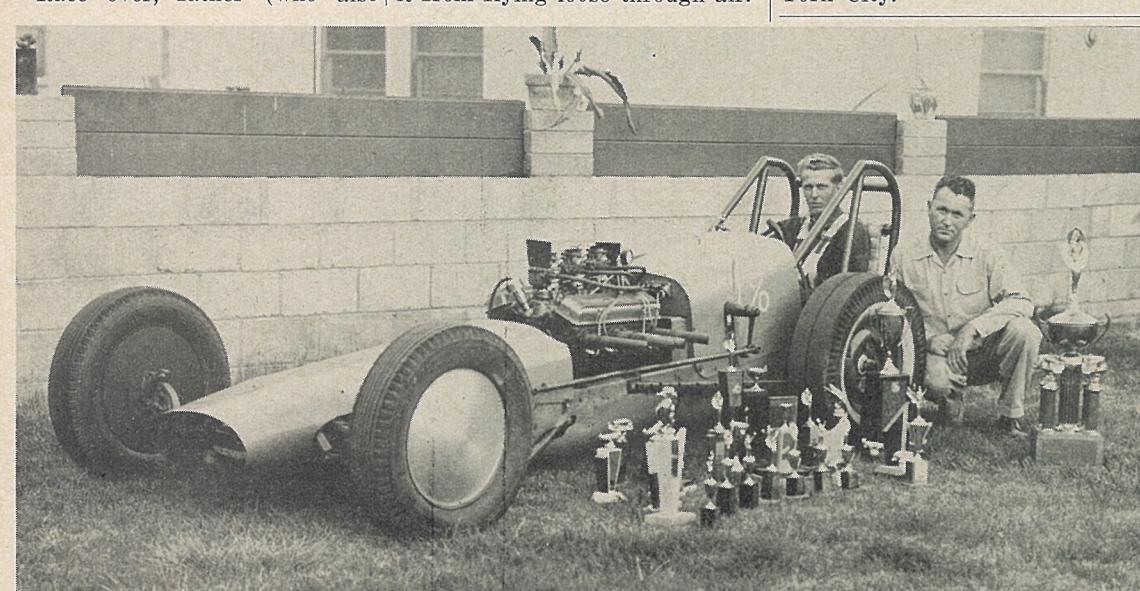
"Both the biggest thrill and biggest trophy we have ever received is the perpetual trophy awarded top car and driver for most points won during a season," Jim Sr. says. The father-son team won it late last year for the first time.

"During our free time, when we are not racing, we spend hours tinkering with the motor and car," Heck Sr. adds.

The engine itself is stripped to the bare necessities. It has no generator, standard ignition system or water pump.

Father and son did all the work, both designing and building themselves. An estimated \$1,500 has been spent on it.

The car is made as safe to drive as possible. In addition to safety and shoulder belts, a "roll bar" guards both sides of driver's seat to protect him in case of a spill. To keep flames from flaring back, a steel plate is placed over the three carburetors (called "jugs" by hot rodders). Another steel cover over flywheel keeps it from flying loose through air.



DRIVER AND COACH—Jim Heck Jr. and Sr. display "dragster" and trophies won in competition during last two years. Large one at right is perpetual trophy, top honor awarded in Southern California area.

"whirlybird" to have a speed of 75 miles per hour, a ceiling of about 10,000 feet, a range of approximately 500 miles, and to get around 30 miles per gallon of gasoline. At present the machine is designed for one passenger, but Moldenhauer believes it can easily be redesigned to accommodate two.

Moldenhauer started building the machine from his own designs about 18 months ago. It would have been completed several months ago, except for an automobile accident about eight months ago in which both he and his wife were seriously injured.

"The accident set us back both physically and financially, and as a result I had to suspend work on the helicopter temporarily," he said. "However, once I start again I expect to have the machine ready for testing in about four months, by working on it evenings and weekends."

The airframe itself, made from steel tubing, is already completed. He has most of the other parts he needs, and completing the machine is mostly a matter of assembly. However, there are several remaining problems, including designing and making a housing for the transmission, and a cooling system for the transmission lubricant.

The helicopter will be powered by a 53 horsepower motorcycle engine, which Moldenhauer already has. This engine develops 5,800 revolutions per minute, and the main rotor cannot exceed 240 rpm, he said. This means that a complex transmission is needed—the housing will be larger than the engine—and that cooling the lubricant will be a problem.

Moldenhauer, who is a tool designer at Convair Pomona, is also a machinist, and during World War II he was a licensed aircraft mechanic. Although he is not an engineer, he read all of the material he could find on helicopter design and operation before he completed the designs for his own machine.

Most of the work on the helicopter to date has been done by Moldenhauer himself, although he has had some help with the welding. Some of the parts, such as gears, were made to his specifications by commercial firms.

Astro Man Named On National Board

Dean H. McCoy, engineering office administration supervisor and member of the Astronautics Employees' Con-Trib-Club board, has been named to a three-year term as a member of the National Budget Committee for various welfare groups.

This committee, composed of 104 community leaders from 74 cities in 30 states, helps to formulate plans, budgets and reports for health and welfare agencies throughout the United States.

McCoy, an active participant in community welfare work in San Diego, assumes his duties March 23-25 at a meeting set for New York City.

Presently the club is in the process of erecting a special "dome house" for the new telescope, said to be the fourth largest in Texas.

The University of Texas has 82- and 36-inch scopes in an observatory in the Davis Mountains near El Paso, and there is a privately owned 20-inch scope in Odessa.

Ground breaking ceremonies for the dome house were held earlier this month. The new structure will be located about 35 feet southwest of the CRA patio.

Work has also been going along simultaneously on the scope itself.

Around 25 club members have spent over 240 manhours on the mirror alone, Commissioner Art Gilligan pointed out.

According to Gilligan, one of



GOING DANCING—The Kodaseets, Gary, Charlotte and six-month-old Vixie Hoc, are dressed up and ready to depart for evening of Indian dances. Kodaseets are members of Thunderbirds, group devoted to perpetuating Indian dances and customs.

Full-Blood Indians Band Together To Revive Ceremonial Dances

A Convair Astronautics man and his wife are helping to perpetuate one of the oldest customs in North America—Indian dancing—through one of the most exclusive clubs in San Diego.

They are Gary (Dept. 341) and Charlotte Kodaseet. Both are members of the Thunderbird Club, a group open only to full-blood Indians. Locally, the group has about 21 members.

Thunderbirds, as individual members are called, gather often for social affairs, although they are best known for their professional entertainment through authentic Indian dances. They perform for clubs, visiting dignitaries, at shows, in parades and often at "Pow Wows" for their own entertainment. In the latter, trophies go to the best performers and Gary has more than one award of this nature.

The Kodaseets maintain an extensive recorded library of Indian songs and dances common to their tribes. Gary is a Kiowa. Charlotte is a Cheyenne and a former tribal beauty "princess."

Both learned to dance at an early age in their native Oklahoma and began to study dancing customs while still quite young. They came west four years ago when Gary joined the Marine Corps. Kodaseet came to Astro as a stock clerk about two months ago following his discharge.

"Few think of Indians as a people who love to sing and dance," Gary says.

But sing and dance they do!

In fact, there is a dance for just about any occasion. One for

harvest, a prayer for rain, brag-gart versions of war dances and shield dances and the stately buffalo dance.

Kodaseet pointed out that although songs and dances may sound and look much alike to outsiders, each has its own story or legend. And their titles, translated into English, sound much like popular tunes. For instance, "You're in My Heart to Stay" and "Hero's Empty Saddle."

All Indian music is accompanied by a drum or tom-tom. And drums always duplicate the beat of the human heart—a loud thump, followed by a softer one. Only the tempo changes from fast to slow to follow the singing.

While Indian braves did much of the dancing in earlier days, there were and still are dances in which the women take part. One is the "Owl Dance" which is more often called the "two step." It is so much like the modern square dance that observers often are confused. But it is an authentic Indian dance, passed down through the years.

The Kodaseets both possess beautiful Indian costumes. The male version contains many feathers and adornments, while the female dress is beautifully tailored of deer skin.

One discussion provokes a laugh with the Kodaseets and that is language differences. Their tribes speak different tongues. Now they are wondering which to teach six-month-old Vixie Hoc Kodaseet.

"I think perhaps we'll just settle for English."

CRA Astronomers at Fort Worth Building Own 19-Inch Telescope

Stars at night are big and bright at Convair Fort Worth, but after completion of the CRA astronomy club's new 19-inch reflector Cassegrainian telescope, they'll look even brighter.

Target date for star gazing through the \$25,000 scope has been set for March 31.

Presently the club is in the process of erecting a special "dome house" for the new telescope, said to be the fourth largest in Texas.

The University of Texas has 82- and 36-inch scopes in an observatory in the Davis Mountains near El Paso, and there is a privately owned 20-inch scope in Odessa.

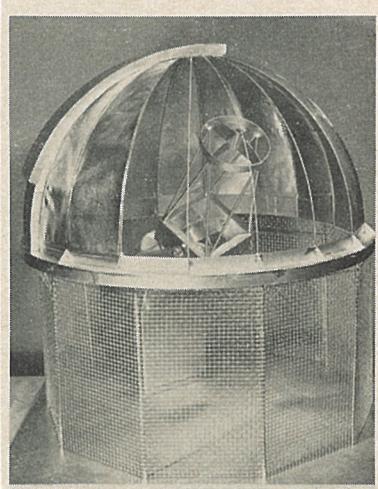
Ground breaking ceremonies for the dome house were held earlier this month. The new structure will be located about 35 feet southwest of the CRA patio.

Work has also been going along simultaneously on the scope itself.

Around 25 club members have spent over 240 manhours on the mirror alone, Commissioner Art Gilligan pointed out.

According to Gilligan, one of

the toughest jobs was boring a four-inch hole through the center of the mirror. The mirror for the telescope was ground from a huge 75-pound block of pyrex.



NEW DOME HOUSE—Scale model shows how CRA astronomer telescope will look at Fort Worth when completed. Cassegrainian 'scope will be about 10 feet long.

NEWS FROM OTHER DYNAMICS DIVISIONS

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair Ltd. of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., airframe and missile builders.

Electric Boat of Groton, Conn., submarine builders.

Stromberg-Carlson, of Rochester, N.Y., telecommunications, electronic equipment.

Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.

General Atomic of San Diego, Calif., nuclear research, development, production.

Electro Dynamic of Bayonne, N.J., electric motors, generators.

Canadair Seeking Sales For Turboprops Abroad

MONTREAL—Two new members of the sales staff of Canadair Limited, last month started tours to introduce two new turboprop transport airplanes, the long-range, four-engine CL-44 and the medium-range two-engine Canadair 540.

The new tours follow a round-the-world trip by Peter H. Redpath, Canadair's vice president for sales.

Matias Carlos "Charlie" Flynn, who was born in Santiago del Estero, Argentina, and educated in Buenos Aires, and who has spent most of his business career there, left Montreal on a South American tour which will take him to Rio de Janeiro, Sao Paulo, Montevideo, Buenos Aires, Santiago (Chile), Lima, Quito, Bogota, Medellin and Caracas.

Earl O'Mara left for a trip through the Middle East and Far East, traveling by way of London to visit New Delhi, Rangoon, Bangkok, Djakarta, Karachi, Addis Ababa, Jidda and Cairo. Formerly a United States citizen, and a graduate of St. Michael's College in Toronto, O'Mara took Canadian citizenship in 1946 after five years' service with the Royal Canadian Air Force. He had previously been a trader at the Toronto Stock Exchange.

The two new types of transport are to begin coming off Canadair's production lines next autumn. Quantities of each have already been ordered by the Royal Canadian Air Force in the military version, and both aircraft are being offered now in commercial airliner, cargo and convertible versions, the Canadair 540 in executive versions as well.

The first CL-44 is due off the production line in August with first flight planned for the latter

part of September or first week in October.

Meanwhile, the first of two prototypes of the Canadair 540 was rolled out of the factory here last month. The prototypes are Convair 440s modified to carry turboprop power plants. The 540s also will carry the designation CL-66.

Stromberg-Carlson Sales, Payroll Rise

ROCHESTER—Both sales and payroll of General Dynamics Corporation's Stromberg-Carlson Division, Rochester's second largest industry, showed moderate gains during 1958, despite the general business decline which affected the entire economy.

At Stromberg-Carlson, substantial orders have been received for telecommunication and electronic equipment from both industry and government. New products developed during the past year should lead to an even greater volume.

Highlighting technical advances at Stromberg-Carlson in 1958 was the issuance of 114 patents to Stromberg-Carlson inventors during the 12-month period.

Carbonic Planning Research Program

CHICAGO—Dr. Frank J. Soddy has joined the Liquid Carbonic Division of General Dynamics Corporation as director of research and development, Rex L. Nicholson, president of Liquid Carbonic announced last month.

Vice president, research and development, for the Chemstrand Co. for the past seven years, Dr. Soddy will be responsible for organizing a research and development program for Liquid Carbonic.

SUBMARINE NAMED GEORGE WASHINGTON

GROTON—Two nuclear submarines being built here by Electric Boat Division of General Dynamics have been named the George Washington and the Patrick Henry.

Stromberg-Carlson has had long experience in the field of auto radios, having been a prime supplier of auto speakers to the Ford Motor Co. for many years, and more recently has manufactured radios for the Edsel. In fact the company has been in the auto radio business for 26 years, having made the first Stromberg-Carlson auto radio in 1933.

The new Stromberg-Carlson auto radio receivers will be marketed through automotive radio and specialty distributors on a national basis.

High Fidelity Auto Radios on Market

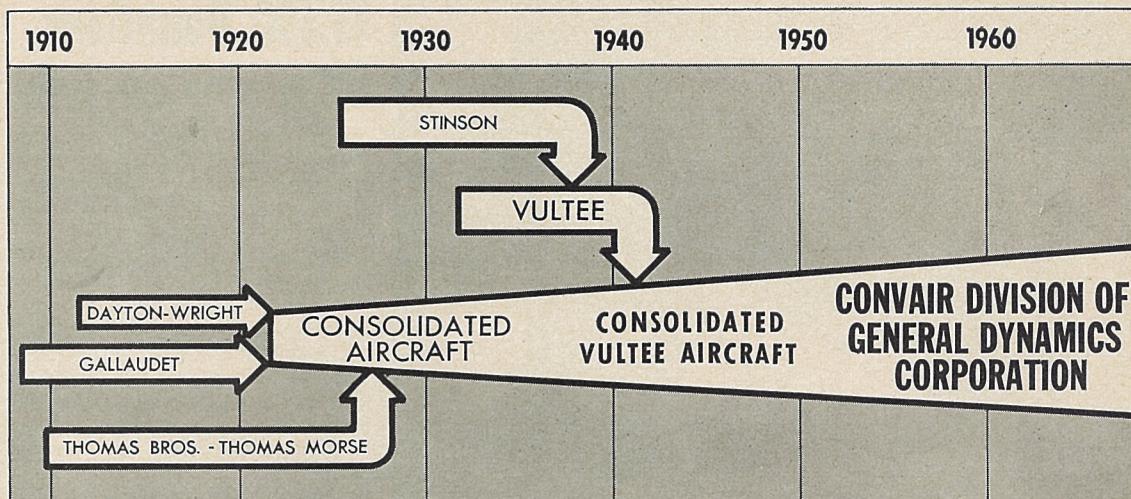
ROCHESTER—Stromberg-Carlson is now manufacturing and marketing high fidelity auto radios for the new car market.

Stromberg-Carlson has had long experience in the field of auto radios, having been a prime supplier of auto speakers to the Ford Motor Co. for many years, and more recently has manufactured radios for the Edsel. In fact the company has been in the auto radio business for 26 years, having made the first Stromberg-Carlson auto radio in 1933.

The new Stromberg-Carlson auto radio receivers will be marketed through automotive radio and specialty distributors on a national basis.



WHITE RUNWAY—First "Canadair 540" is rolled out at Montreal in colors of Air Transport Command, Royal Canadian Air Force.



BACK TO 1908—Rough chart shows generally the early "tributaries" that came together to form what is now Convair Division of General Dynamics Corporation. General Dynamics itself has roots that go back deep in U. S. history. These will be covered later. In the meantime, this first of a series starts with Edson Gallaudet in 1908.

Five Years Ago...

Following are brief excerpts from Convairiety of five years ago:

★ ★ ★

South half of assembly building at Convair Fort Worth is readied for production of B-36 spare parts and components.

* * *

Convair's first R3Y "Tradewind" makes maiden flight, taking off and landing on San Diego Bay after two hours in air.

* * *

Installation of 750-ton capacity stretch forming machine begins at Convair Fort Worth.

* * *

Con-Trib-Club at Convair SD establishes \$25,000 "disaster fund," to be used in case of civilian disaster or calamity.

* * *

John Jay Hopkins, chairman of Convair Board of Directors, predicts that supersonic long-range bomber, now in development stage, will follow B-36 on Fort Worth production line.

* * *

Averaging 325 mph, Convair-Liner 340 sets coast to coast (San Diego to Miami, Fla.) record for twin engine aircraft—seven hours and eight minutes.



Canadair's First 540, Converted 440, Rolled Out at Montreal

MONTREAL—First Canadair 540 (a Convair 440 airframe converted to Eland turboprop power plants) rolled out of the Canadair plant here Jan. 19.

The second converted 440 is expected to follow sometime this month.

The two aircraft are being

made available to the RCAF until Canadair begins delivery of its own Montreal-built airframes later this year.

Conversion involved new nacelles, increased fuel capacity, improved braking and faster retraction of the undercarriage.

Military version of the Canadair-built aircraft will be primarily a cargo carrier, though easily convertible to passenger use or a combination. Ten have been ordered so far by the RCAF, designated type "C-109." In commercial versions the 540 is being offered in passenger, cargo and executive configurations.

Exterior dimensions of the Canadair 540 will be the same as the 440. However, the Canadair-built airframes will have a three-foot longer passenger cabin and there will be seats for 48 passengers, or 58 in the high density version.

Maximum takeoff weight of the turboprop is 53,200 pounds or more than two tons greater than the 440. Useful load is more than 3,000 pounds greater.

Convair History Begins In Installment Form

(This is the first installment in a history of Convair Division of General Dynamics Corporation which will be continued from issue to issue of Convairiety. It is excerpted from extensive research material gathered and edited by Howard O. Welty, now chief of editorial in Astronautics Division's communication department, and Nelson Fuller, manager of research and history, Convair General Office public relations.)

Convair's Earliest Roots Traced Back to Edson Gallaudet in '08

Like a river, Convair developed from many tributaries. The one that goes back the farthest in point of time was created by Edson F. Gallaudet when he opened an office in Norwich, Conn. in 1908 with the intention of building airplanes as the Gallaudet Engineering Co.

Gallaudet, a pioneer aeronautical engineer, as a child was fascinated by man's dream of flight. After graduating from Johns Hopkins in 1896 with a doctorate in engineering, he taught physics at Yale, but spent so much spare time on aeronautical experiments that older faculty members labeled him eccentric.

These labors in 1898 and 1899 resulted in a model kite (now in the Smithsonian) which included his conception of the warping wing. Had he fully developed his ideas he might have been the first to achieve heavier-than-air flight, for the Wright Brothers did not hit upon the warping principle until July, 1899.

The pioneer glider pilots of those days corrected the tipping of a wing by shifting their weight. The Wrights determined the same effect could be achieved by mechanically altering the wing's camber. (Glenn H. Curtiss subsequently fashioned an aileron for this purpose and years of bitter patent litigation followed.)

In 1908 Gallaudet opened his office in Norwich. In 1911 he learned to fly at the Wright Brothers school. Meanwhile, he began plane manufacture with his brother, Denison. In 1912 they exhibited the Gallaudet A-1 "Bullet" at New York City's first Aero Show, held in May in Grand Central Palace.

Bullet was a stubby, low-

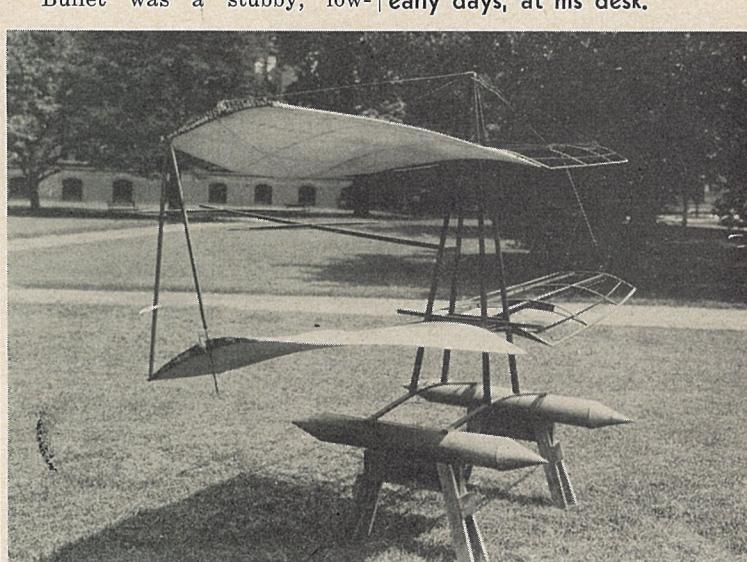
wing monoplane having the pusher mounted aft of the tail section. It was very fast for that day. Gallaudet claimed to have achieved 130 mph, faster than most World War I fighter planes ever attained. The Bullet cracked up two months later, injuring Gallaudet.

Gallaudet's next design appears to have been a monoplane flying boat, the Model B. (This was the work in hand when Felix J. Rossoll, then 18, got a job at Gallaudet in 1914. Rossoll remained with the company through dissolution and merger and continues to work for Convair to this day, in Dept. 15 at San Diego Division.)

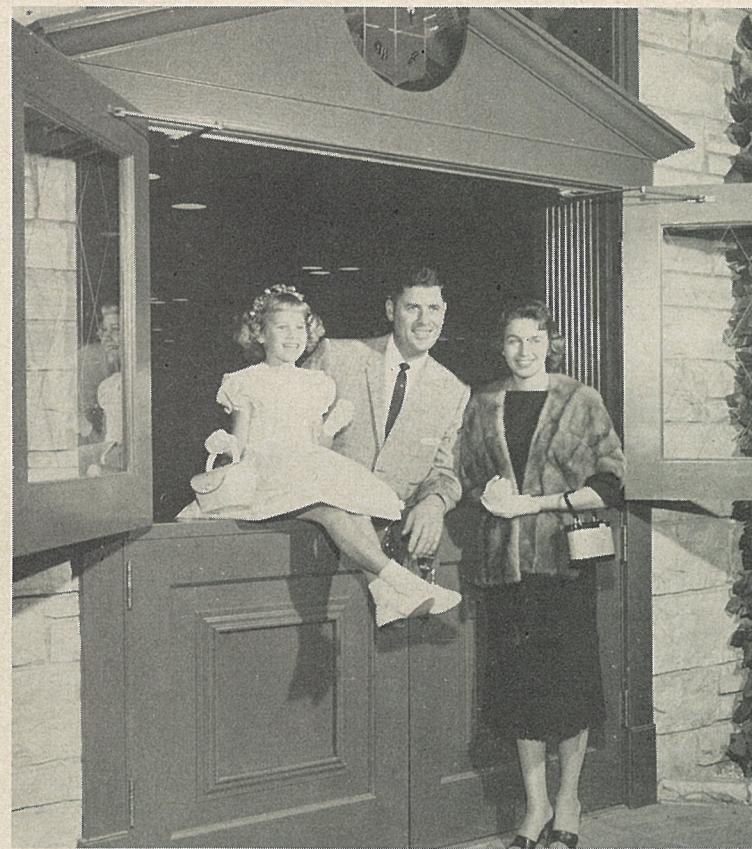
In 1914 Gallaudet also completed a biplane trainer, one of the first U. S. aircraft with plywood fuselage. In 1915 he undertook construction of a radical seaplane, the twin-motored D-1.



Old and faded photo shows Edson F. Gallaudet, brilliant aeronautical engineer of aviation's early days, at his desk.



This is Edson F. Gallaudet's kite-flown, wing warping experiment. Photograph from Smithsonian Institution.



FASHION FOOTNOTES—This trio, plus many others, will model latest fashions at Astro show set for Feb. 12. Youngster is Kendra Bryan, 7, whose mother is in Dept. 130. Others are John Green (Dept. 130) and Jane Webster (Dept. 183). Mink stole above will be one of door prizes. Tickets are now on sale through employee services.

Three Sets of Twins Among Models for Fashion Show

Thirty-four Astronautics men, women and children, including three sets of twins, have been engaged to act as models for the Feb. 12 style show planned by the CRA Women's Council.

Set for the Astro reception center (Bldg. 2) at 8 p.m., the show will offer fashions for every member of the family. As such, both men and women are invited.

Tickets to this "Frills and Flannels" affair, as it is called, are now available through industrial relations outlets. They are \$1 each.

The feminine models are, with departments in parentheses: Mona Draper (400), Aldean Rollowits (400), Shirley Kuhn (549), Shirley Aless (521), Trudy Reinkens (130), Dorothy Morcombe (191), Ellen Weight (322), Marylyn Ruebel (130), Ida Marie Freyer (130), Deanna Carlsen (270), Fran Wilson (578), Darlene Scott (daughter of Jack Scott, 510), Marie Preakeen (305), Marty Mills (325) and June Webster (183).

Male models are: Mike Cassidy (son of Jean Cassidy, 450), Larry Chambers (305), Bill Dawsey (521), Bill Rector (595), Chris

Arapostathis (549), William Brinker (130), John Green (130), R. M. Lyons (130), Phillip Marsh (130), Harley Grabowski (130) and Dave Gorham (290).

Youngsters are: Kendra Bryan (daughter of Jean Bryan 130); Jon and Joan Freyer (twins of Ida Marie Freyer 130); Brenda and Sherry Scott (twins of Jean Scott 193); Rhonda Fay and Donna May Smith (twins of Don Smith, Air Force); and Donald S. Luyendyk (son of Frances Luyendyk 130).

Sponsors are members of the North Clairemont Square Merchants' Association. Commentators will be Molly Morse and Al Schuss.

Sports Car Clubbers Planning Drag Race

Astronautics Sports Car Club will hold a drag race event Feb. 15 at Paradise Mesa drag strip.

Time trials begin at 9:30 a.m. with elimination events in the afternoon. Trophies will be presented.

The event is open to all drivers of foreign or sports cars at Astro.

Log Book Entries

Promotions

ASTRONAUTICS

Promotions and transfers to or within supervision effective Jan. 19:

Dept. 110-0, Contracts: To contract administrator, J. R. Bachman, R. A. Wohl.

Dept. 192-0, Tabulating: To tab asst. supervisor, P. M. Dolan.

Dept. 193-0, Industrial Accounting: To accounting supervisor, J. Ragusa.

Dept. 220, Manufacturing Control: To manufacturing control supervisor, D. A. Hunter. To manufacturing control asst. supervisor, E. A. Perryman. To manufacturing control foreman, H. S. Murphy.

Dept. 290-0, Manufacturing Development: To technical services supervisor, N. D. Baird. To technical services asst. supervisor, G. N. Elgin.

Dept. 305-0, Product Support Planning & Control: To support task control supervisor, W. W. Johnson.

Dept. 320-0, Support Service: To administrative support group supervisor, D. R. Suchner.

Dept. 340-0, Support Center: To chief of support supply, K. R. Aitken Sr.

Dept. 579-5, Field Test Support: To asst. flight test group engineer, D. K. Squires.

Dept. 732, Sheet Metal: To asst. foreman Gr. III, J. V. Vecchio.

Dept. 733, Processing: To asst. foreman Gr. III, R. D. Arnold, R. E. Reeves.

Dept. 758, Major Assembly: To asst. foreman Gr. V, P. P. Standley.

AFMTC

Promotion effective Jan. 19:

Dept. 571-3, Convair Operations: To foreman Gr. V, E. J. McGee.

VANDEBERG AFB

Promotion effective Jan. 19:

Dept. 576-6, Convair Operations: To transportation asst. foreman, F. E. Pratt.

Service Emblems

ASTRONAUTICS

Service emblems due during the period Feb. 1 through Feb. 15:

Twenty-five-year: Dept. 758-0, N. L. Wire.

Fifteen-year: Dept. 130-0, R. E. King; Dept. 310-1, K. E. Bradley Jr.; Dept. 573-3, Tom Jones; Dept. 771-0, W. C. Litten.

Ten-year: Dept. 270-1, Phillip O. Jordan; Dept. 539-5, L. W. Lind.

AFMTC

Service emblem due Feb. 1:

Ten-year: Dept. 571-5, B. F. Ellzey.

Personals

ASTRONAUTICS

I wish to express my thanks to all Astronautics employees and especially those of Dept. 211-3 for their many acts of kindness at the recent passing of my son, Lawrence.

Max Vicker, Dept. 211-3

My daughters and I would like to express our deepest thanks to Convair people everywhere for their many acts of kindness, generosity and help at the passing of our father and husband, Hans. Your many kind deeds and acts will never be forgotten.

Mrs. H. R. Friedrich, Karin and Barbara

Births

ASTRONAUTICS

AMBROSE—Son, Mark C., 6 lbs., 5 oz., born Dec. 4 to Mr. and Mrs. Raymond J. Ambrose, Dept. 773.

DORN—Daughter, Patti Lynn, 5 lbs., 12 1/2 oz., born Jan. 9 to Mr. and Mrs. Theodore (Merle) Dorn, Dept. 758.

LEIB—Daughter, Anna Rebecca, 6 lbs., 14 1/2 oz., born Jan. 24 to Mr. and Mrs. John E. Leib, Dept. 556-5.

PARR—Daughter, Lynne Annette, 10 lbs., 14 oz., born Jan. 15 to Mr. and Mrs. J. L. Parr, Dept. 532-1.

\$5,690 Donations OK'd by Con-Trib

Convair Astronautics Employees' Con-Trib-Club Committee last month gave final approval to the expenditure of club funds for two major purposes.

One was a grant of \$1,440 to the Hearing Society of San Diego to meet pressing needs.

The second was a disbursement of \$4,250 to various local hospitals to be used for physical therapy type equipment. For this purpose, \$750 each was allotted to Mercy, Children's and County Hospitals. And \$500 each went to Sharp, Grossmont, Paradise Valley and Hillside Hospitals.

Dick Mitchell, committee chairman, indicated the sum given each hospital was based on a survey of needs for polio equipment made by I. B. Jenkins, committee member. Grants were made in lieu of a single grant to the National Health Foundation, sponsors of the "March of Dimes" drive, which does not accept gifts from such organized giving agencies as Con-Trib-Club.

In each case the grants were made in the name of all Astronautics employees.

Club to Give Scholarships

Astronautics Management Club this week announced details of its first scholarship program open to sons and daughters of all Astronautics employees in San Diego County.

Two awards will be made this year, each for \$500. One will go to an Astronautics daughter, another to an Astro son. The latter will be known as the Dr. Hans Friedrich Memorial Award, honoring the late Astro rocket expert. In addition, runners-up, again a boy and a girl, will receive \$100 Savings Bonds.

The program is open to any son or daughter, either by birth or adoption, of an Astronautics employee working in San Diego County. Applicants must be graduating from high school either in January or June of this year.

Application blanks have been distributed to all high schools in the area.

Badminton Entries To Play in Classes

Astronautics badminton players join forces with those from San Diego Division Feb. 21 and 22 for a full-scale tournament set for the Federal Building, Balboa Park.

While entries will dictate events, present plans call for three Classes, A, B and C. Included will be the usual men's competition as well as mixed singles and doubles and even a special event for ladies, if entries warrant.

Astro players may sign up before Feb. 13 with Bunny, ext. 1111.

Anglers to Organize Astronautics Club

Anglers, male and female of all ages, are invited to attend an organizational meeting planned by the Astronautics Fishing Club at 7:30 p.m. Feb. 10 in the employee services office, Bldg. 8.

At that time all details necessary for starting the organization will be discussed. Refreshments will be served.

All fishermen are invited to attend and bring their families.

More Voices Needed For Mixed Chorus

The CRA Astronotes, mixed chorus at Convair Astronautics, is in the "market" for talent.

Especially needed at this time are baritones and tenors, although employees and members of their families who can sing any part will be welcomed.

Astronotes hold rehearsals each Monday night at 7:30 at the Astro cafeteria.



NOW YA SEE 'EM—And then you don't when Herb Parsons "smokes" five targets as fast as he can pull the trigger. Parsons is slated to give one of his free exhibitions, sponsored by the Gun Club, at noon, Feb. 8, at Gillespie Field.

Gun Club Sponsors Exhibition By 'America's Fastest Shot'

Convair SD and Astro gun enthusiasts and others who just like to watch a good show will have a chance to watch Herb Parsons, billed as America's fastest and most entertaining gun handler, put on a free public shooting exhibition at Gillespie Field, noon, Feb. 8.

This is Parsons' second visit to San Diego, Jack Swank, Gun Club commissioner, said. "Four years ago he put on a spectacular exhibition that drew over 1,000 spectators and we're more than happy to sponsor another."

A self-taught wizard with a Winchester, Parsons has been shooting since the age of 8, and in his exhibition performs spectacular shots with an arsenal of twelve rifles and shotguns.

Parsons accompanies even his most difficult feats with a steady patter of comment.

Some of the feats he will perform with a .22 caliber rifle include throwing a 2 1/4-inch maple block into the air, cracking the block and splintering the pieces with four bullets in three seconds.

In another he ejects the empty .22 caliber cartridges into the air and uses them as targets for his bullets.

Afterwards, Parsons will conduct a question and answer session. Safety in the handling of firearms is as important to him

CRA Discount Tickets

The following tickets and items are now on sale at employee services office at discount rates:

DECALS—Astronautics window decals for cars or home, 10 cents each.

FASHION SHOW—CRA women's activity Feb. 12 at Astro plant, tickets \$1 each.

MAGIC KINGDOM CLUB—Membership cards available which allow discounts on all rides, entrance fees, etc., at Disneyland, Anaheim.

MARINELAND—Discount admission tickets available.

SPACE PRIMER—An Introduction to Astronautics, 10 cents per copy.

Weekend Traveling Club Will Organize

Convair Astronautics families who like to take to the open road over weekends are being sought as prospective members of a Travel Trailer Club which will hold an organizational meeting at 7:30 p.m. tomorrow (Feb. 5) in employee services office, Bldg. 8.

Art Wrightson (Dept. 181-1)

said the group would include all owners of smaller trailers who would band for the purpose of group treks over weekends.

Tuition Refund Plan in Effect For Astronautics' Students

Astronautics employees planning to take college courses this spring may qualify for a tuition refund—Astro's way of helping employees advance their education.

Refunds for college level courses taught at San Diego State, San Diego University, California Western University and the University of California Extension are included. Certain correspondence courses from accredited colleges also qualify.

To qualify for a refund an employee must take courses related to his job. Those working toward a degree or certificate

may receive refunds, up to \$90 per calendar year, on courses required by the school, if the major field of study is related to his job.

A request for tuition refund (Form A346) must be submitted to Astro's chief of educational services within three weeks of course-starting dates. A course completion certificate (Form A1215) must go to the same office within three weeks of the end of the course.

Forms, plus information on the refund program, are available through the educational services office, Column A-4, Bldg. 4, at the Astro plant.

Lens Bugs Are Human, Lured by Pretty Girl

There is something about a pretty girl that brings out the camera "bugs." At least at Convair Astronautics where a successful model shoot was well attended during January.

A repeat is now set for 7:30 p.m. Feb. 9 at the Astro executive dining room. Astrolens members will be training their cameras on Fran Wilson, a member of the engineering test evaluation group.

Ken Rinker, Astrolens commissioner, also reminds all members of the regular quarterly contest set for Feb. 23.

Field Shoot Slated For Astro Sunday

Archers from both Astronautics and San Diego Divisions will get together at 9:30 a.m. Sunday for a regular monthly field shoot at the Astro range.

Under sponsorship of the Astro group, events will be staged for all ages. Medals will be presented to the winners of various handicap groups.

All Convair employees in the San Diego area are invited to take part. A limited number of CRA-owned bows and arrows are available for those who would like to try their hand at field shooting, according to Al Stone, CRA archery commissioner at Astro.

Horsemen Will Ride At Rancho Feb. 15

Astronautics Riding Club members will gather at 7:30 p.m. Feb. 10 at the Astro cafeteria to map out final plans for a Feb. 15 trail ride.

The ride, slated for the Rancho Riding Club, Rancho Santa Fe, will begin at 10:30 a.m.

F. W. Augustine, CRA commissioner, will supply details to those calling ext. 1911.

Snow Famine Irks Skiers

Convair Astronautics snow skiers, plagued by a snow "famine" in their favorite Southern California haunts are planning to "get back" at the elements—they are holding a swap night.

Slated for 7:30 p.m. tonight (Feb. 4) in the Astro executive dining room, the event will feature exchange of various items such as skis, boots and other gear, according to Bob Weaver, CRA commissioner.

Also under discussion will be a Feb. 14-15 trip either to the Wrightwood area or Mammoth Mountain, dependent upon weather conditions.

Interested parties are invited to take part, Weaver said.

A movie of spring skiing in Colorado will be shown.



SNOW SEEKERS—Astro skiers above halted their quest for winter fun long enough for this picture at Sugarbowl near Donner Summit over New Year's holiday. Seated are Mal Cox, Lee Stone, Peggy Sims and Marge Patterson. Standing behind are Bob Weaver, Al Krieger, Bill Knapton, Bob Weaver Jr., Jim Langston, Dale Struhann and Al Kunde. Back row are Jack Abels, Spike Hisey, Bill Witzell and Larry Atwell.

CONVAIRIETY**TWO TEAMS HOLD BASKETBALL EDGE**

Two teams, Transportation and Development, continued to set the pace in Wednesday shop league action among Astronautics engineers, but a rapidly-improving Propulsion Development five has served notice of a future threat.

Transportation edged Dynamics 21-19 and lost to Development, 40-35, in the past two weeks. Development, in turn, fell to Propulsion Development, 49-22, with the latter also winning over Launch Control, 36-33. In other games, Launch Control beat Handling Equipment, 42-28, and Handling Equipment turned on Dynamics, 28-22.

Test Data paced the Friday loop through the first three weeks but ran into an up and coming Sycamore team last Friday night. Test Data beat Computers, 31-25, and Standards Lab, 34-14. Sycamore topped Standards Lab, 31-22, and Computers, 38-13. Stores, also surging forth, polished off Systems Lab, 35-26, and Standards Lab, 51-18.



LENS LOVELY—Fran Wilson (Dept. 578) has been signed up to pose for model shoot planned by Astrolens for Feb. 9. A Convair daughter, her father is Hack Wilson (Dept. 756). She plays with Astro girls' cage team and sings in CRA choral group.



WIDE OPEN NOW—Convair Astronautics recently obtained permission to allow all Astro keglers to take part in forthcoming championship tournament whether they are sanctioned or not. Signing agreement is Charles Fleming, right, West Coast representative for American Bowling Congress, while CRA Commissioner Willard Brassell, left, and Jack Dillon, secretary of San Diego Bowling Association, look on.

TOURNEY OPENED TO ALL BOWLERS

Special arrangements between Astro CRA and the American Bowling Congress have been made to allow all Astro keglers to take part in the upcoming plant championship tournament.

The tournament, set for March 7-8 and 14-15 at Clairemont Bowl, is now open to any bowler, whether he is an ABC member or not. In short, participants do not have to be sanctioned.

Entries are being taken through Feb. 20. Entry blanks are available at employee services, Bldg. 8.

Reichenbacher Wins A Double Victory

Dave Reichenbacher took a double victory at the January Astro Pistol Club event by winning both the .22 Police and the .22 National events.

In the latter Russ Oliver (Dept. 131), and Bill Bacon (Dept. 130) came in second and third.

The .22 Police event saw: Bob Raymond (Dept. 130) winning the expert class; Joe Miller (Dept. 771) the marksmen event; and Ralph Crosley (AF) edging Ed Maiers (573) and Roland Schneider (454) in the sharpshooter bracket.

Four women are now taking part in all regular shoots, according to Commissioner Bill Geopfarth.

Racing Enthusiasts Will Meet Feb. 10

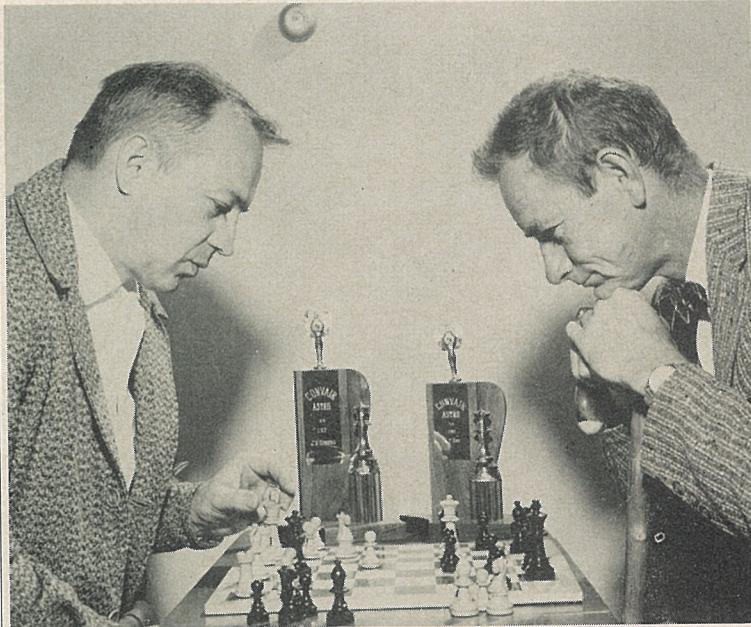
A special call went out this week for racing enthusiasts of all ages to attend a meeting set for 7:30 p.m. Feb. 10 at the Astronautics cafeteria.

Adults interested in participating in "Formula K" or "Go-Cart" racing and youngsters to drive quarter and half-midget racers are asked to turn out. Purpose will be the possible sponsorship of such activities by Astro CRA.

Under consideration at this time is the possibility of including a race course as part of the facilities for recreational purposes in the CRA area adjacent to the Astro plant.

SWEEPS ENTRIES CLOSE TOMORROW

Tomorrow (Feb. 5) is the final date for entering the Astronautics golf sweepstakes scheduled for this weekend at Bonita. Call Bunny, ext. 1111, for entries.



EASY DOES IT—J. W. Horning (Dept. 756), left, winner, and R. P. Day (Dept. 595-3), runner-up, repeat crucial series played during recent Convair Astronautics CRA chess tournament. Horning won top honors during four rounds that saw 11 players participating.

CRA Sports & Recreation Convairity**Dozen From Astro Answer Talent Call**

About a dozen Convair Astronautics CRA members have answered the call for a talent show featuring Astro personnel, but many more are needed, according to Jean Cassidy of the CRA Women's Council.

Present plans call for staging an all-Astro talent show April 8. Rehearsals will start soon. Those interested in performing, helping direct, stage or working behind the scenes are asked to contact Alma at ext. 1111. Deadline is now Feb. 13.

Astro's Rockhounds Ballot on Officers

John R. Stussy (Dept. 556) has been named president of the fast-growing Astronautics Rockhound Club.

Other officers include: Fred Schulz, vice president; Viola Beard, secretary; and Ed Haupt, treasurer. Committee chairmen named were: Ray Beard, field trips; W. H. Discher, entertainment; and L. B. Field, shanty.

The Rockhounds have been drawing some 40 to 50 persons for a series of meetings and field trips.

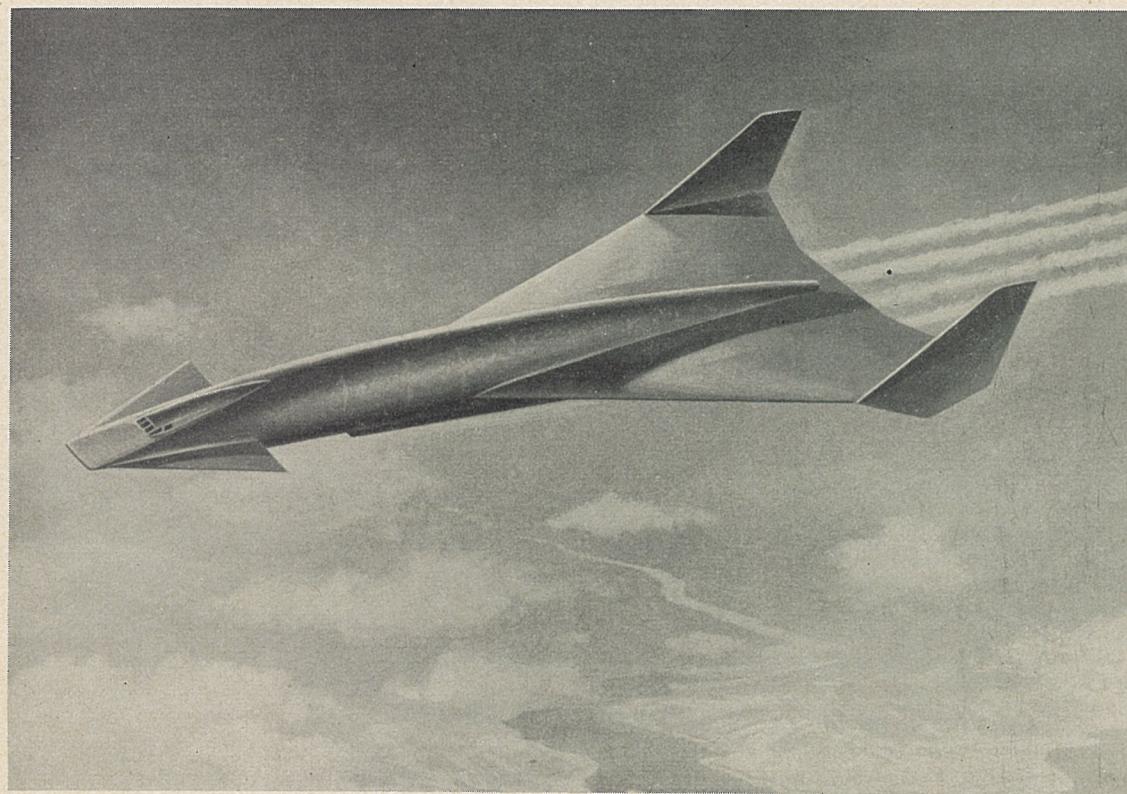
Next meeting will be held at 7:30 p.m. tomorrow (Feb. 5) at the Astro cafeteria. Under discussion will be a field trip. All employees and members of their families are invited to attend.

Horning Wins Final In Chess Tourney

Eleven players turned out for the first chess tournament staged by Astro last month with J. W. Horning (Dept. 756) edging R. P. Day (Dept. 595-3) in the final round. Players took part in four rounds.



VISITORS' LOT—John Robert Powers, a man constantly surrounded by beauty and charm, found more of same at Astronautics recently when he called to ink a contract for a CRA-sponsored charm course. His "greeters" include this bevy of Astro lovelies who pose for working "press." At Powers' left is Bunny Ingraham, coordinator for CRA.



TRANSPORT, 1970 MODEL?—Artist's conception is of transport of future, able to cruise at three to five times speed of sound at 60,000 feet or higher. It is one of hundreds of configurations considered by Convair in supersonic airplane studies.

Sebold Expects Airlines Will Buy Mach 3 to 5 Transports For 1970

A passenger airplane capable of flight at twice the speed of sound could be ordered into production today for delivery to airlines by 1965, but a Mach 2 airplane probably never will be built, delegates to the 27th annual meeting of the Institute of Aeronautical Sciences were told in New York City last week.

Instead, R. C. Sebold, vice president of engineering for Convair Division of General Dynamics Corporation, told the IAS symposium on aero/space technology, passenger transports flying three to five times the speed of sound and available in 1970 are a very much more likely prospect.

Sebold based his appraisal of "commercial air transportation beyond the subsonic jets" on factors which he said would make a Mach 2 commercial transport unattractive economically to airline operators. While exhaustive studies by Convair engineers have shown the Mach 2 transport to be competitive with all existing aircraft—"A certain money maker, a good airplane in every sense"—he said it does not appear probable "an airline would finance new Mach 2 equipment on the strength of a five-year advantage." Sebold reasoned that "by 1970, this airline would have to re-equip again to meet the competition of Mach 3 to 5 transports."

Sebold said these conclusions were based on evaluation with electronic computers of more than 100,000 supersonic aircraft design parameters. In addition, he said Convair has devoted more than 10,000 hours of wind tunnel

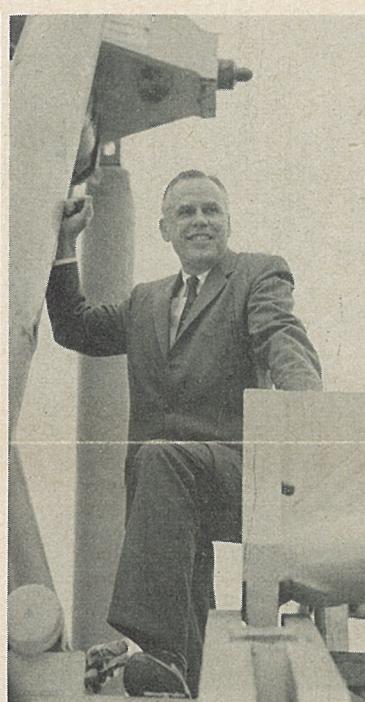
testing to "the more promising of these various configurations."

The Mach 3 to 5 transport, Sebold said, should have an operational life of 15 to 20 years, or longer. "Thus it appears to us that the commercial market is too small to justify development costs for a Mach 2 transport."

More significant, Sebold said, will be the problems more directly related to the Mach 3 to 5 transport itself. Because of the sonic booms such aircraft would create as they crossed the nation, these Mach 3 to 5 transports will be required to fly at subsonic speeds below approximately 35,000 feet, national aeronautics and space agency studies have shown. Sebold labeled this or similar heights the "civilization altitude." Supersonic transport flight below the civilization altitude, he said, would subject populated areas to "public irritation and property damage."

Because these aircraft must climb up to and let down from the supersonic cruising altitudes at subsonic speeds, there is a practical limit to the advantages of high speeds. For example, he said, a transcontinental transport designed for cruising at seven times the speed of sound probably would never attain that speed in flight. "It would accelerate out to cruising speed only to find that it must immediately start deceleration to land at Los Angeles."

Sebold said that any airplane design that ignores this factor "would be in deep trouble." Yet this requirement means much extra fuel must be carried. Up to 15,000 pounds of extra fuel would



R. C. Sebold

be consumed in the climb and acceleration pattern, he said.

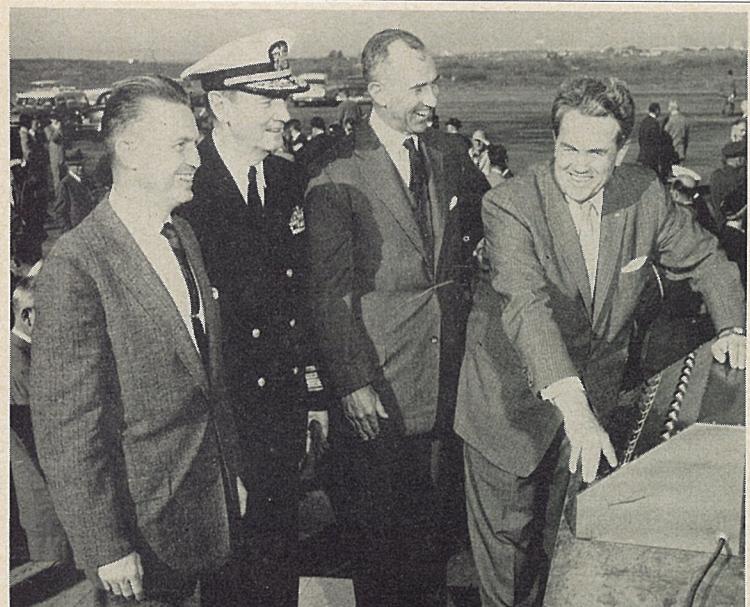
Sebold said the "next step beyond the Mach 3 to 5 transport may be a ballistic transport." While he acknowledged that Convair has received "no serious inquiries about a commercial version of the Atlas (intercontinental ballistic missile) . . . nevertheless our Convair Lobber missile has demonstrated that ballistic resupply of troops is practical."

Sebold said that there probably will be "entirely different vehicles for different classes of trip length." He added that aircraft like the Convair 880, presently the world's fastest jet transport, was designed specifically for the short-to-medium ranges for which the Mach 3 to 5 transport is not suited.

In discussing the shape of the transports of the future, Sebold indicated the aircraft would not be radically different in external shape from today's advanced military aircraft.

But structurally, he said, they will be sharply different—because of the tremendous heat generated by aerodynamic friction on the aircraft's skin surfaces. Cooling the Mach 3 to 5 transport cabin interior by methods conventional today would require cabin walls a foot thick, or a gale of air blowing through the cabin area even if a source of cool air were available. The air surrounding such an airplane, however, would "simply be too hot at these Mach numbers," Sebold said.

One solution suggested has been to cool the cabin walls with circulating water, he said.



DEDICATED—Frank Pace Jr., president of General Dynamics Corporation, was a key speaker at dedication of San Diego industrial park on mesa near Astronautics Division plant last month. Pace (second from right) is shown with B. F. Coggan, SD Division manager and chairman of city's industrial development commission; Rear Adm. Charles Hartman and Mayor Charles Dail.

USAFE F-102s Go to Europe Via Flattop

First contingent of F-102s destined for overseas bases has landed in Europe.

Fourteen of the Convair-built jet interceptors (12 F-102As and two TF-102As) were unloaded from the U. S. Navy aircraft carrier "Croatan" at St. Nazaire, France, on Jan. 9.

The first F-102As will form the 525th Squadron commanded by Lt. Col. Raymond S. Brown based at Bitburg Air Base, Germany. The 525th is assigned to the 86th Fighter-Interceptor Wing headquartered at Ramstein, Germany. Other squadrons will be activated in the Netherlands and France.

The planes will be assigned to USAFE bases in Europe to bring to that continent the same interceptor defense capability that the United States now has. The F-102A is the first plane to be based in other parts of the world that can provide the speed, altitude, and armament comparable to interceptor fighter strength in the U. S., said O. W. Harper, chief of Convair SD interceptor service, who just returned from a two-week trip to the European area.

While there he joined in general discussions relating to activation of F-102A squadrons and their ground support at a USAFE weapons phasing group meeting at Weisbaden, Germany.

Air Force personnel stationed there "are extremely anxious to fly the F-102As and get them into service," commented Harper.

On hand to prepare the ground work for activation of the first F-102A squadron is a Convair SD field service team made up of C. H. Clements, field service supervisor, O. B. Johnson, J. C. Morris and G. S. Matthews. Convair SD spares representative is N. A. Picard.

C. J. Falkenthal of SD production flight left here last week for the European base to conduct ground school instruction for AF pilots who will be flying the F-102As.

Eventually there will be at least 30 San Diego field service men stationed in Europe.

Six From Convair Attend Conference

Six Convair representatives were among more than 350 military and industry leaders at the 38th Air Force-Aircraft Industry Conference recently in Palm Springs, Calif.

August C. Esenwein, Convair executive vice president, was among more than 20 industry and military key officials delivering presentations to go along with the "Teamwork" conference theme.

Other Convair people attending included Joseph J. Alkazin, SD manager of customer service; Howard R. Kennedy, SD chief of service publications; Charles S. Brandt, SD senior design group engineer; William F. Funk, FW design safety specialist; and Don D. Martin, technical representative, Norton AFB.

Ehricke Given Title Of Centaur Director

Krafft A. Ehricke has been relieved of his duties as assistant to the chief engineer at Convair Astronautics to become program director-Centaur, according to J. R. Dempsey, Astro manager.

In his new post Ehricke will have full responsibility for the Centaur program, development of an upper stage for a modified Atlas ICBM. He reports directly to Dempsey.

JOHNSON APPOINTED SUPPORT SUPERVISOR

W. W. Johnson has been named task supervisor in the Astronautics support planning and control section of product support department, according to J. P. Scheu, chief of support planning and control.



COLD OUTSIDE?—Preparing to get into long winter's session of testing is Carswell AFB B-58 Hustler pictured here at Eielson AFB in Alaska. Testing is part of "Operation: Raw Deal."



ALASKAN SNAPS—David F. Johnson, SD field service engineer on duty with F-106 undergoing cold tests at Eielson AFB, Alaska, sent home these candid snapshots. Trip north in C-97 included buffoonery (top photo, Carl Nelson of Hughes makes like Wyoming "Jackalope"—his home state) and poker. Third from top, offloading at White Horse, Canada. Third from bottom, F-106 at White Horse, awaiting takeoff. Second from bottom, barracks at Eielson at sunrise (10 a.m.) Christmas Day. Bottom, Woody Grassi tries hand at barbering, with advice from hecklers.



"Now let's cook up a good alibi and go home for supper."



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

Convairity

Vol. 12, No. 4

Wednesday, February 18, 1959

SAN DIEGO, POMONA AND ANTELOPE VALLEY, CALIFORNIA

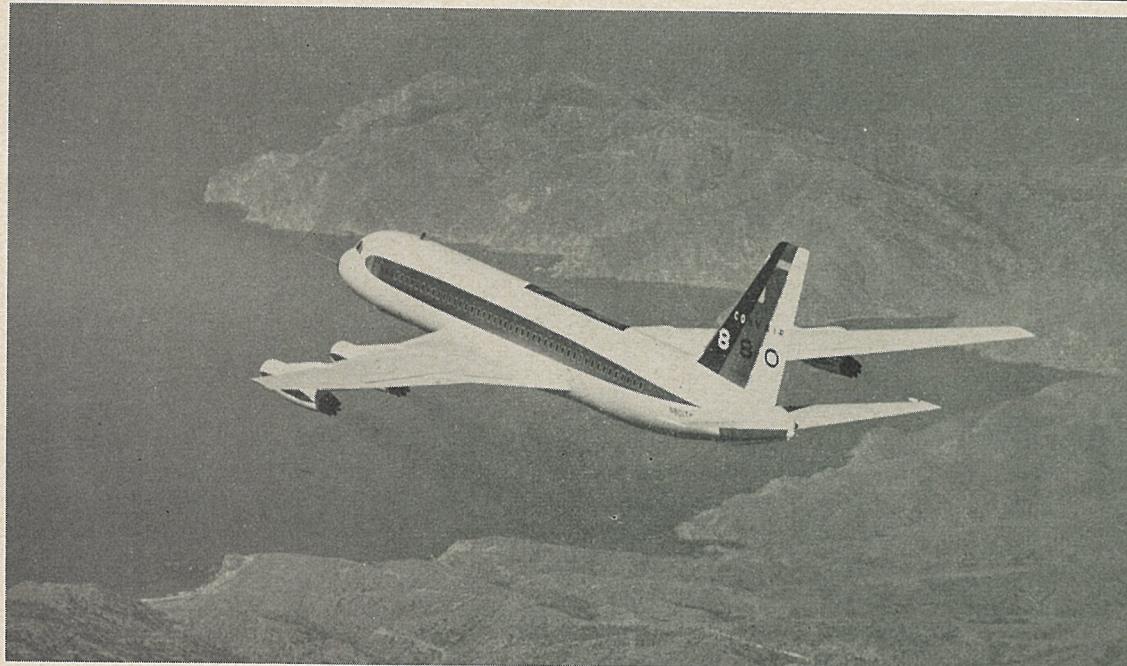
Astronautics

EDITION

(Serving Astronautics Division of Convair)

Astro news office, Bldg. 2, new plant, ext. 1154.

DAINGERFIELD AND FORT WORTH, TEXAS



COASTING—Graceful 880 cruises over coast on one of early flights before it was taken out of flight status to prepare plane for next test series.

Dynamics 'Task Force' Attacks ASW Problem

Details of a unique, company-wide task force created within General Dynamics Corporation to deal with the growing problems of anti-submarine warfare were revealed this week by Frank Pace Jr., Dynamics president.

The program has been under way since 1957 when an ASW planning and coordinating committee was formed under the chairmanship of L. B. Richardson, senior vice president-engineering.

Actively engaged in air, undersea and surface aspects have been Convair, Electric Boat and Stromberg-Carlson Divisions and Canadair Ltd.

"The increasing threat of the Russian submarine force dictates that every relevant resource among the free countries be marshalled against it," Pace said.

At a Navy-General Dynamics press conference in Rochester, N. Y. this week Richardson com-

mented on a recent report that no weapon system now in existence, even on an experimental basis, offers an adequate defense to the deep-running (nuclear) submarine.

"We of General Dynamics have a special appreciation of this danger because our Electric Boat Division is pioneering in the design and construction of quiet, deep-running subs. But, by the same token, we are convinced that our intimate knowledge of this new weapon gives us an advantage in finding a defense for it."

Convair's representatives on the ASW committee include R. C. Sebold, vice president-engineering, and Charles D. Perrine, Convair Pomona assistant division manager-engineering. Committee staff executive is James G. Wenzel, Convair SD ASW projects coordinator, (Convairity, Oct. 15, 1958).

Important ASW work was briefed in this fashion:

Electric Boat: "Tullibee," nation's first true anti-submarine submarine, now under construction. Study completed under Navy contract analyzes submarine's role in ASW.

Stromberg-Carlson: A new sonar test tank, largest and best equipped indoor facility of its kind in the free world, now in operation. High powered underwater transducers have been developed for use in a new highly classified sonar (underwater detection) system. Airborne radio receiver being designed as important unit in new sonobuoy systems. Other projects: ship-

(Continued on Page 2)

Lobber Completes Evaluation Firing

Convair's Lobber, ballistic cargo missile that can deliver emergency supplies to front-line troops, has successfully completed its first evaluation firings at Redstone Arsenal in Huntsville, Ala.

Sixteen missiles were fired for Army observers. Preliminary firing tests were made at the Army's Yuma (Ariz.) Test Station.

Accuracy of the Lobber is based on pre-spinning it as it leaves the launcher, which enables it to follow a true ballistic course.

More Than 15,000 Attend Training Courses at SD

Over 15,000 Convair SD people took some type of training in more than 1,000 classes sponsored by SD educational services section during the last year.

A total of 354,952 manhours were spent in the classroom, either in-plant or on off-company time, reported H. W. Rubottom, chief of educational services.

Facing the task of placing the F-106 interceptor in production, together with design, tooling, and construction of the first 880 jet transports, during the year 394 classes were held under the division's technical program.

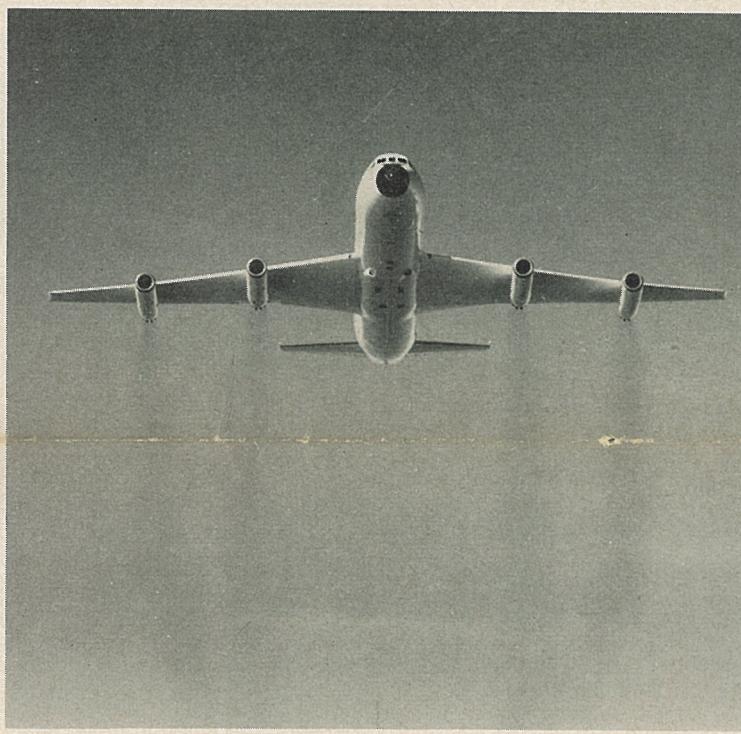
"It early became apparent," explained Rubottom, "that addition-

al knowledge and skills were required to accomplish the assigned tasks efficiently. In consequence, educational services personnel were called upon to assist management in meeting the complex problems of providing the necessary training."

Induction of 3,067 new employees and 850 engineering employees, together with 30 summer employees, was done under the orientation program.

Management program saw 3,509 supervisory personnel taking advantage of advanced education classes offered under factory and engineering management development, and the Convair-Cal. Western University program.

(Continued on Page 2)



HEAD-ON—Feathery trails from 880's four jets make a pattern behind during one of its seven flights (totaling 15 hours) completed thus far.

F-108 Wing Team at SD Established at Plant 2

Organization and relocation of the project team which will guide the F-108 wing program at Convair SD is nearing completion, according to W. S. Stroud, project manager.

All personnel involved in the planning, engineering, and manufacture of the F-108 wing for North American Aviation's supersonic interceptor will be geographically located at Plant 2.

"Due to the nature of this program and in the interest of meeting a very tight schedule, we feel that it is important to centralize and consolidate all necessary functions of the project," explained Stroud.

Engineers and tooling personnel will be located on the second floor of Bldg. 4. Offices of Stroud and his administrative staff will be on the first floor, as will offices of the four resident North American representatives, Frank Kember, William Franklin, Earl Larsen, and Charles Nunley.

The project staff is expected to be established in its permanent locations by the end of February.

First group of engineers, 33 Convair men who have been working at the North American plant, have returned to SD Plant 2 to form the nucleus of the group which will increase to about 100 as the program develops.

Under Convair SD's multimil-

lion-dollar contract with North American it will be building wings for the Air Force long-range interceptor which has a combat ceiling of over 60,000 feet and combat range of at least 1000 miles.

According to the Feb. 6 North American "Skywriter," highlights of the F-108 brought out at a recent Senate Armed Services Committee hearing were "its clean aerodynamic design, its two engines, its construction of stainless steel rather than aluminum, its ability to carry guided missiles with nuclear warheads . . . it is manned by a two-man crew."

Since its return "home" plane No. 1 has added two more flights to the five it made while based at North Island. Observers on the first flight from Lindbergh Field Feb. 5 were B. F. Coggan, SD Division manager and Convair vice president; Ralph Bayless, SD chief engineer; B. J. Simons, senior project engineer for the 880; and Kenneth Ward of the 880 engineering project office.

"It is a wonderful plane," said Coggan after his two-hour flight.

All of the engineering officials praised the plane's performance and the low noise level.

John Knebel, SD test pilot who will pilot the second 880 to go into flight testing early in April, made his first trip on the flight as co-pilot.

(Continued on Page 2)

Salute to Engineers' Vital Role Seen in Week-Long Observance

More than 8,000 members of San Diego's engineering community (a large percentage of whom are with Convair) are set to participate in a nation-wide observance of National Engineer's Week which opens Friday (Feb. 20) and runs through March 1.

With a Space Age theme, the observance is calculated to bring to the public recognition of the vital functions of America's engineers in civil and defense economy. Sponsors are the National Society of Professional Engineers and 26 other engineering, scientific and technical societies.

J. R. Dempsey, Astronautics Division manager, is San Diego chairman. More than a score of Convair men have executive posts in the observance (Convairity, Dec. 23, 1958).

Many events are slated during the period. Dr. Harold Urey, Nobel Prize winning University of California scientist, will speak at a teacher-student dinner set for Feb. 20 at the University of San Diego.

A panel of key men will discuss prospects of new fuels at an Energy Resources dinner Feb. (Continued on Page 2)

Dynamics 'Task Force' Attacks ASW Problem

(Continued from Page 1) borne mine-hunting sonar, research in non-acoustic detection, underwater target classification, etc.

Canadair Ltd.: C1-28 "Argus" is now flying, latest ASW aircraft in production today, equipped with latest in sub-detection and attack equipment.

Convair: Both under Navy contract and separate company funding, ASW systems integration problem being attacked. Over half-million dollars expended on ASW seaplane design that won Bureau of Aeronautics competition in 1957. (Never built, lack of funds.) Under Navy contract Convair is giving careful consideration to ASW as a possible mission for nuclear-powered aircraft, due to almost unlimited range and endurance.

Feb. 27 Deadline On Scholarships

Convair SD and Astro sons and stepsons have until next Friday (Feb. 27) to apply for the annual Convair sons' scholarships.

One Astronautics and two San Diego scholarships will be given for study in the fields of engineering or allied sciences. Winners will have tuition and laboratory fees paid during a maximum of five college years and an additional \$250 a year for expenses.

Any son or stepson of a Convair SD and Astronautics employee is eligible, providing the parent has worked for Convair for five or more years. Students must be graduating from high school this year, or have graduated within the last two years.

Those eligible will be notified by March 16. Winners will be announced about April 1.

Forms are available at high schools throughout the San Diego area and at Convair SD and Astro educational services offices.

APPRENTICES TAUGHT NUMERICAL CONTROL

Numerical control group of Convair SD tooling department (Dept. 600-2) has been increased by eight newly-trained people following the conclusion of the programmers' training course.

Out of 300 applicants, 20 students, including three apprentices, were accepted to take the training. All who were not incorporated into the group will be held in reserve to be used later as the need arises.

The first 8-week course to build up the new numerical control group at SD was taught by Harry Cooper and Robert Gregor.

"Lobber" logistic missile system (designed and developed and prototypes built with company funds) offers many possible applications to ASW. Equipped with either nuclear or non-nuclear warhead, missile appears attractive for depth charge applications. Other applications include placement of sonobuoys, flares, etc.

For hydrodynamics research Convair has not only a hydrodynamics laboratory but only privately owned towing basin in U. S., ideally suited to research into surface and subsurface ASW components. Controlled tests have been conducted at speeds over 100 feet per second, equivalent to 300 knots full scale. Convair SD's large physics group is focusing attention on most severe problem of ASW—detection.

Ralph Bayless Now Institute Fellow

Ralph L. Bayless, Convair SD chief engineer, has been named a fellow of the Institute of Aeronautical Sciences.

Bayless, who has been with Convair since January, 1936, accepted the honor at the annual IAS Honors Night dinner last month in New York City.

One of the nation's leading aeronautical engineers, Bayless has figured in the design of as many basic types of aircraft as any engineer in the country. At the time of his appointment as SD chief engineer, in May of 1955, Gen. Joseph T. McNarney, then president of Convair, declared: "Bayless' contributions to the science of aeronautical engineering in the past 20 years have made him one of the outstanding men in his field."

Convair Daughter Gets Pageant Lead

A Convair daughter has been chosen to play the lead in the annual Ramona Pageant at Hemet this year.

Raquel Tejada, 18-year-old daughter of Josephine Tejada of Convair SD Dept. 192 and A. C. Tejada, Astronautics Dept. 595-5, competed with 10 others in tryouts for the part. A freshman at San Diego State College, Raquel is Fairest of the Fair, Miss Con-Tour, and Maid of California.

The 32nd showing of the pageant will be April 18-19, 25-26, and May 2-3.



880 MOVES ON—At top, J. V. Naish, Convair president, and B. F. Coggan, SD Division manager, look over flight data of 880 flight from Lindbergh Field on which Coggan and engineering officials were observers. From left to right, B. J. Simons, senior project engineer; Ralph Bayless, SD chief engineer; Coggan and Naish; P. M. Prophett, assistant chief engineer, flight test; L. R. McClain of flight test instrumentation; E. H. Davies, senior instrumentation engineer. Center photo, field operations and flight test crews who handled first 880 while it was based at North Island Naval Air Station. Bottom, R. J. Bowers, SD area supervisor for FAA, gives Prophett and Don Germaraad, co-pilot and pilot, permission to bring 880 back to Lindbergh Field.

SD Club to Present Mug of Year Tonight

Presentation of the top Management Club award—Mug of the Year—will highlight tonight's Convair SD club meeting in the Caribbean Room of El Cortez Hotel.

However, presentation of the President's Award has been postponed to a later date.

A special program addition will feature a talk on flight characteristics of the Convair 880 by Don Germaraad, chief engineering test pilot, and a movie of plane's maiden flight.

Guest speaker will be Donald C. Mitchell, National Management Association member, who will talk on "Creative Thinking." Social hour starts at 5:30 p.m., dinner 6:30 to 7:30.

Engineers' Salute Set For Next Week

(Continued from Page 1) 24 in the Balboa Park Club.

Other panel discussions and seminars will be presented by radio and TV stations Feb. 23-28.

In addition, many industries will hold open house, students will be invited to view Armed Forces facilities and ships. Civic groups will hear speeches on engineering subjects, and combined news media will stress the role of the engineer in today's world.

One feature event is an Engineering Exposition scheduled for the Electric Bldg., Balboa Park, Feb. 26 through March 1.

Sponsoring engineering, technical and scientific societies have mapped out a series of meetings for students interested in various fields of engineering.

880 Prepared For Next Test

(Continued from Page 1)

Plane No. 3, the second 880 to fly, will be delivered to field operations the first week in March. Plane No. 2 is undergoing an extended structural loading test program at the seaplane ramp.

The pressure cycle article (No. 99-4) is expected to go to the ramp this week for testing while plane No. 4, the first fully configured ship, is scheduled to go to flight test in early July.

Palmdale Facility Payroll Will Rise

As previously predicted, employment at Convair Palmdale facility is scheduled for a gradual upswing as F-106 activities move into higher gear.

According to facility manager W. J. Martin, it is anticipated that the present employment figure of about 1,230 will show a 300 to 500 increase during the next six months.

The increase will result primarily from recall of employees who were placed on lay-off status during the lull between the phase-out of F-102 activities and the build-up of the F-106.

Burt King to Head Electrical Society

C. Burt King Jr., senior electrical group engineer at Convair SD, was elected president of the Aircraft Electrical Society of San Diego Feb. 12 at a meeting in the IAS Bldg., 3380 N. Harbor Dr.

F-102A to Make Europe Debut At Air Show

(Pictures on Page 3)

Convair's F-102As are slated to make their first public bow in Europe this week.

B. F. Coggan, Convair SD Division manager and Convair vice president, will represent the company at the introduction of Convair jet interceptors at a press conference and air show at Bitburg Air Base, Germany, tomorrow (Feb. 19).

Arranged to present the F-102 and its weapon system to representatives of NATO countries, the one-day program will commemorate the arrival in Europe of the first F-102A and TF-102A delta-wing jets. The first F-102As are assigned to the 525th Fighter-Interceptor Squadron attached to USAFE's 86th Fighter-Interceptor Wing based at Bitburg.

About 150 military and press personnel from NATO countries and the AF are scheduled to hear Brig. Gen. B. O. Davis, deputy commander of operations, USAFE, describe the purpose of the F-102 in Europe as updating the AF capabilities and completely modernizing its air power. Tentative plans called for participation of Gen. Frank Everest, commander, USAFE Hdqrs.

Coggan will brief the assembly on Convair's part in the development of the F-102A to meet AF requirements. John Rowe of Hughes' Aircraft Co. public relations, will explain the Falcon air-to-air missile which makes up the weapon system of the F-102. A. C. Welti of Convair SD public relations also will be attending the conference.

If weather permits, the F-102As will go through their paces in high-speed runs, take-offs, mass flybys, and landings.

2ND FLOOR, BLDG. 19 BEING REMODELED

Renovation of offices on the second floor of Bldg. 19 at Convair SD is due to be completed the first week in March.

The entire west half of the floor, occupied by customer service groups under J. J. Alkazin, manager, is being remodeled. Clearing space for construction work, L. J. Bordelon, chief of transport service, and 40 people of his section have taken up temporary quarters on the third floor of Bldg. 51.

The area in the southeast corner of the same floor is being reworked for General Office functions.

In the Bldg. 51 rehabilitation project the east half of the third floor is due to be released by the contractor this weekend. The large southwest area of the second floor will go into the works the first of next week.

Pace and Lanphier To Visit Moscow

Tom Lanphier Jr., Convair vice president, as head of the National Aeronautic Association, will lead a U.S. delegation to a meeting of the Federation Aeronautique Internationale May 28-31 in Moscow.

The delegation will include Frank Pace Jr., president of General Dynamics Corporation. Delegates will be received by Russian civil aviation authorities and a visit to a civil aircraft factory is on the agenda.

SD's Con-Trib-Club Makes \$4,000 Gift

Convair SD contributors to the Con-Trib-Club may consider their Easter Seals paid for, Con-Trib-Club chairman, Keith Sears, said last week.

A \$4,000 contribution by the club has been sent to the San Diego Society for Crippled Children for their '59 drive.

Likewise, Sears said, solicitors for the Cancer Crusade have been instructed not to contact homes displaying C-T-C window stickers.



PROGRAMMERS—O. W. Sweetland, Dept. 600 superintendent at Convair SD Plant 2, presents journeyman certificates to apprentices, Calvin Woempner, Herbert Meyer, and Buford Campbell, after their completion of first numerical control programming course.

Convairity

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations, General Offices, San Diego, Calif., Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

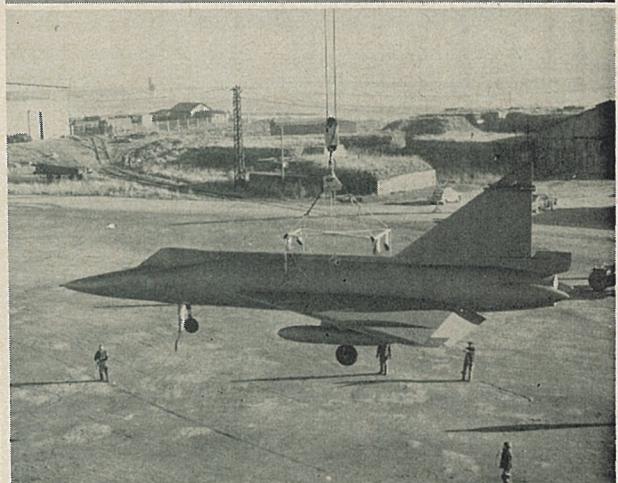
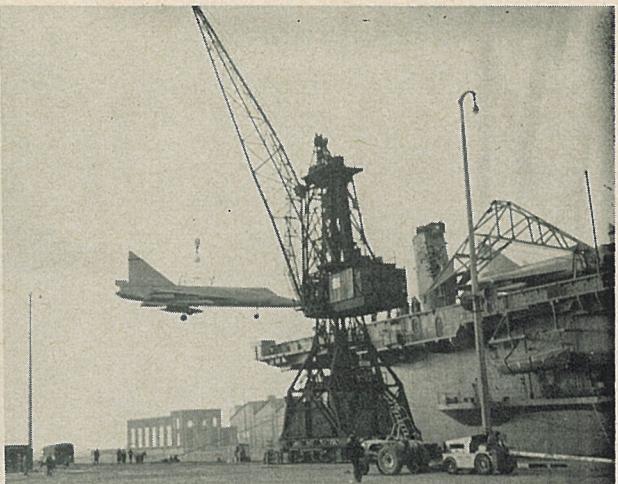
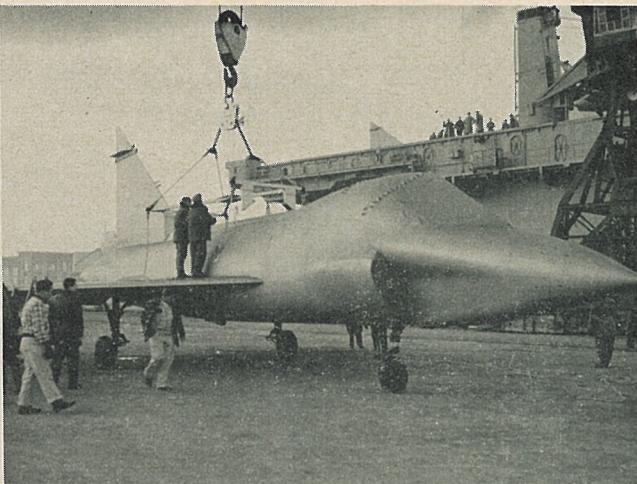
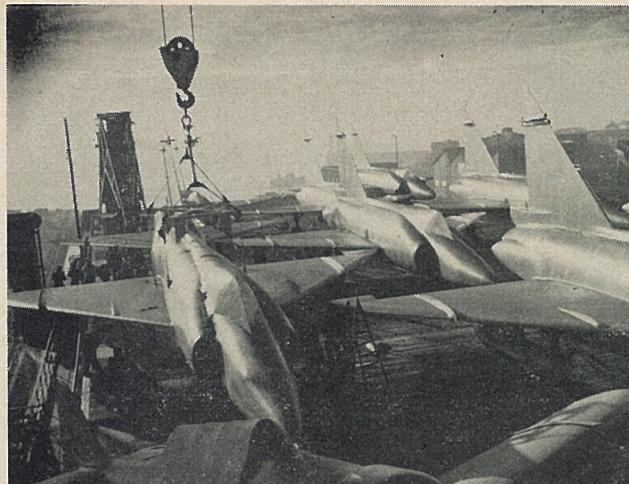
SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Grace Fath, Helen Pemberton, Fred Bettinger.

Astronautics Editorial Offices, Bldg. 2, new plant, ext. 1154. Staff: Bryan Weckersheimer, news editor.

FW Editorial Offices, Col. 69C, mezz., ext. 2961. Mailing address: Convairity, Convair, Fort Worth, Texas. Telephone PERshing 8-7311. Staff: Bob Vollmer, news editor; Bobbie Sue Marr, Horace A. Baker Jr.

Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Offices, Room 31, Bldg. 301B, Palmdale, ext. 337. Staff: Betty Lou Nash.



F-102S REACH EUROPE—First Convair jet interceptors to be based on foreign soil were unloaded from Navy aircraft carrier "Croatan" at St. Nazaire, France, last month. At lower left, F-102As and TF-102A trainers are "decocooned" from protective covering at Sud Aviation hangar before being flown to Bitburg Air

Base, Germany, where they will be attached to 525th Fighter-Interceptor Squadron of 86th F-1 Wing of USAF Europe. Shown in lower center (left to right), Maj. B. H. Barton; Lt. Col. R. S. Brown, commander of 525th FIS; Col. C. M. Young, commander of 86th F-1 Wing; and Maj. J. B. Anderson.

Scale Models Explain B-58 Ground Support

A scale model of the B-58 Hustler bomber, complete with scale model ground support equipment, is helping the Air Force in Washington this month to create a better understanding of today's sophisticated weapon systems.

It is the second year in a row for a Convair product to be chosen for this purpose. Last year it was the supersonic F-106 all-weather interceptor being produced at Convair San Diego.

Since it would be impossible to wheel a B-58 and its ground support equipment through the halls of Congress and the Pentagon, scale model displays created at Convair Fort Worth are being used by Air Force teams doing the job.

"This, in my opinion," said J. T. Cosby, B-58 program director, "is because Convair people at San Diego and Fort Worth are creating the most advanced weapon systems of our time. And it is an honor that we're tagged to help out."

To understand today's weapon systems, including their ground support equipment, takes only a quick look back into the history of aircraft.

"There was a time," Cosby explained, "when an airplane was almost wholly self-contained. It carried with it—in flight—almost everything it needed."

"When the pilot was ready to take off, a ground crew member swung the prop to start the engine—and that was it."

But today's sophisticated weapon systems are as different from that as a crystal radio differs from a 1959 TV.

To give the aircraft maximum

speed, altitude, range, and target-hitting capability, everything not absolutely needed in flight is left on the ground, and that's ground support equipment.

Today's super-systems for bombing, navigation, reconnaissance and so on require testing before missions to make certain they're operating as they should. So ground test equipment is built to do the job.

"To check out such a system," says Cosby, "the test equipment must be 'smarter' than the system itself. Further, the test equipment must have built-in feedbacks so it can check on itself."

To broaden understanding of these new concepts in today's advanced weapon systems, Air Force teams are making presentations in the Department of Defense and before congressional committees.

For this purpose they use scale models.

The models were built by employees of FW Dept. 82, according to G. C. Gann, assistant foreman. Using the models, then, complete displays were created by employees in illustrations section, according to Johnie Herbert, supervisor.

The models, including some 18 different ground support items, were taken to Washington by O. N. Shivers, assistant project engineer.

They illustrate equipment used when the B-58 is on alert status, when it is given a periodic maintenance inspection, when a pod is being loaded, and when other necessary operations are being performed.

Tiny Airport Aids Customer 600 Briefings

First orientation course on the Convair 600, sister ship to the 880, will be presented to American Airlines the middle of next month.

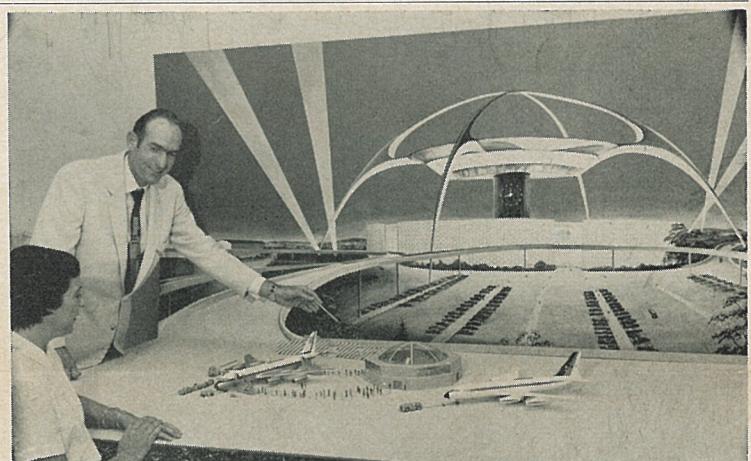
A team of field service representatives will go to Tulsa, Okla., American's headquarters, to brief management personnel on the latest developments incorporated in the 600. First Convair 600 is expected to be delivered in June, 1961.

Glen Arner, Harry Addis, and John Nowak of customer service (Dept. 15-4) will be equipped with one of the group's latest visual aids, a large diorama realistically showing the 600 and 880 at a typical airport. Models and tiny figures, all made at the Convair SD plant, demonstrate the ground-servicing technique and turn-around capability of Convair's jet transports.

Customers will be shown graphically (with time recorded on a tower clock) how the streamlined servicing is designed to get planes off the ground in the minimum of time (25 minutes). All servicing is done from the right-hand side of the plane and all passenger loading and unloading from the left-hand side.

Twelve men in the field service group, supervised by R. K. Hall of transport service, have already taken comprehensive 880 information to TWA, Kansas City, Mo.; Delta Air Lines, Atlanta, Ga.; Capital Airlines, Washington, D. C.; and the Japanese Airlines at Tokyo, Japan.

Trips are being planned farther afield to bring the same data to



DIORAMA—Glen Arner of Convair SD transport service points out to Mary Applegate ground-servicing advantages of Convair's new jet transports, 600 and 880, with realistic airport diorama used in customer training.

customers in other parts of the world—Swissair and SAS in Europe; Real in Brazil and Transcontinental in Argentina by this fall.

At home, the courses have been given on a trial basis to Convair SD personnel in educational services, production flight, service parts, and provisioning customer representatives.

These condensed courses given to customer planning and management people at customers' headquarters are of about 12-hr. in length, or approximately a week's duration, explained Don Maxion, in charge of the customer training program.

"We emphasize Convair's own special developments and unique designs, instead of dwelling on conventional features common to every aircraft," said Maxion.

For instance, Scotchweld bonding is explained in detail, and advantages of the integral fuel tanks, and, in the case of the 600, the General Electric CJ-805-21

engine which will provide higher thrust and lower noise level, and the anti-shock bodies on the wing to reduce drag from shock waves.

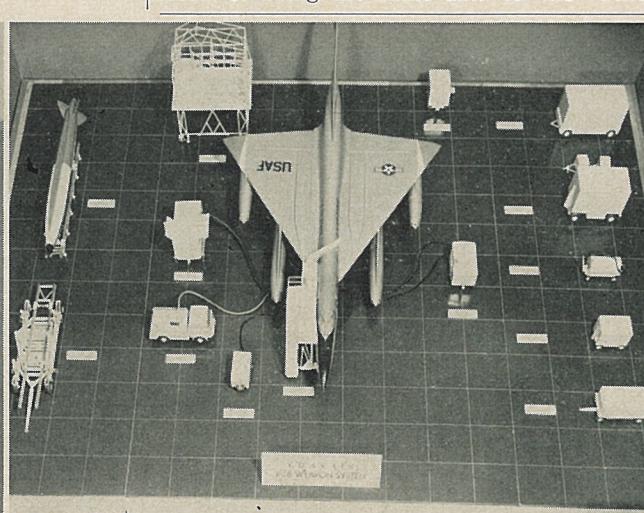
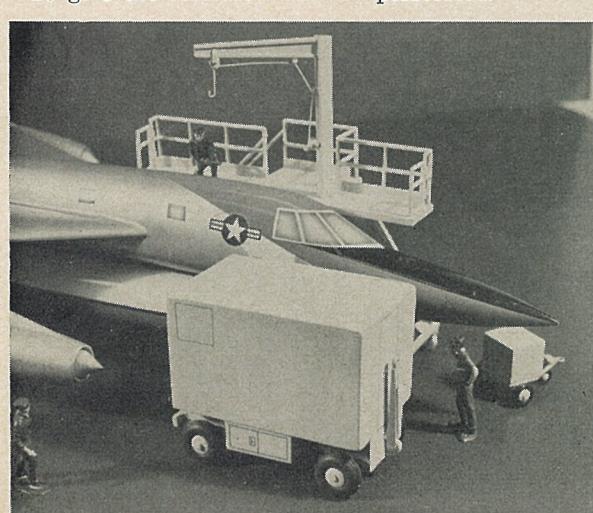
Orientation handbooks, visual aids, diagrams and drawings, and tape recordings are compiled in the SD section to supplement all lectures.

When the full-length maintenance training program starts for 880 customers this summer in the new training area in Bldg. 4, Plant 1, it will be a 240-hr. course extending over six weeks' time. Specialists from TWA will be arriving about mid-summer.

The program is set up as a part of the customer service department under L. J. Bodelon, chief of transport service.

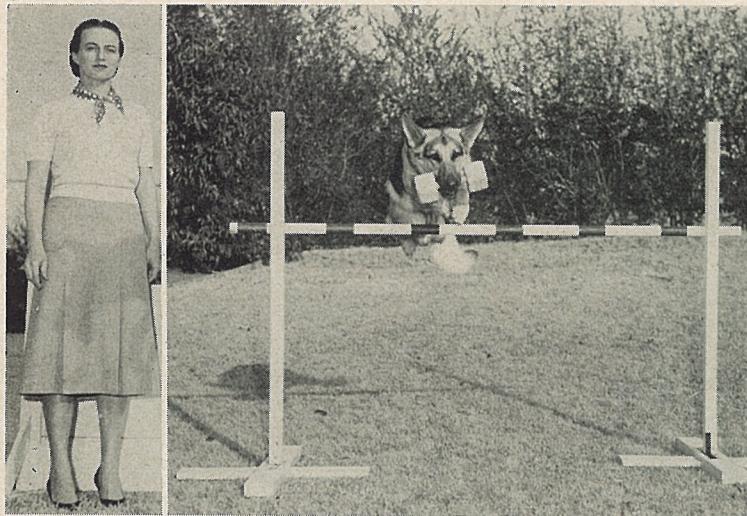
BENNER ASSIGNED TO ENGINEERING

P. M. Benner, chief of inspection at Convair SD Plant 2, now is assigned to SD engineering under Convair's executive development program.



PENTAGON ASSIGNMENT—These models of B-58 and ground support equipment have been helping USAF explain weapon system. In center is airplane with

units normally needed for support. At left is bombing-navigation mobile test set. At right defensive electronic counter-measures system test set is in place.



FETCH, TIA!—Anna Stucker, wife of H. T. Stucker of Dept. 6-1, goes through a few obedience tricks with her 2½-year-old German police dog, Tia. They are preparing for an AKC show slated for March.

Seven From Convair FW Qualify For 'Expert Dog Handler' Title

Seven Convair Fort Worth people have been "in and out of the dog house" lately—and at the same time have remained on good terms with their better halves.

The seven are all dog trainers preparing for the American Kennel Club show in March.

These include C. H. Buse, Dept. 19-4; Ann Gillespie, daughter of Paul Gillespie of Dept. 6-2; J. M. Clark Jr., Dept. 6-1; Mrs. H. T. Stucker, whose husband works in Dept. 6-1; Rex Robinson, Dept. 22-4; R. E. Finch of Dept. 6-1; and Mrs. R. B. Morse, whose husband works in Dept. 22.

All seven trainers are members of the Fort Worth Obedience Club, an organization for dog handlers.

"One thing about the Fort Worth Obedience Club," Clark said, "is that you can't join until you have become a proficient handler."

Purpose is to train the handlers—not the dogs.

The club meets almost every Sunday afternoon at Dobson Kennels, south of Benbrook. Owner Dwight D. (Bill) Dobson Jr., who trains youngsters at the Children's Museum in the spring and fall, acts as instructor.

According to Mrs. Stucker, there are actually four degrees that the canines may work toward.

The first is recognized as the "companion dog" or CD degree. In order for a dog to fall in this category, he must be able to do a figure eight, stand for examination, sit for one minute, remain down for three minutes, recall, heel on and off and stop and sit down.

Second degree canines get the CDX or the companion dog excellent title. Here the dog does more advanced tricks off leash and drops on recall as well as retrieves a dumbbell. He also does high jumps, broad jumps, remains down five minutes and sits three minutes with his handler out of the room.

Dogs in the third or utility dog (UD) category must heel off

leash, work with hand signals, perform directed jumping, be able to seek through scent distinction, etc.

The fourth degree is for the tracking dog.

Degrees are won at AKC shows. Dogs must compete and make a passing grade in three shows.

Digital Computer Specialists Meet

Ben Ferber of Convair SD's digital computing lab is presiding over a meeting of digital computing specialists in New York City this week (Feb. 17-20).

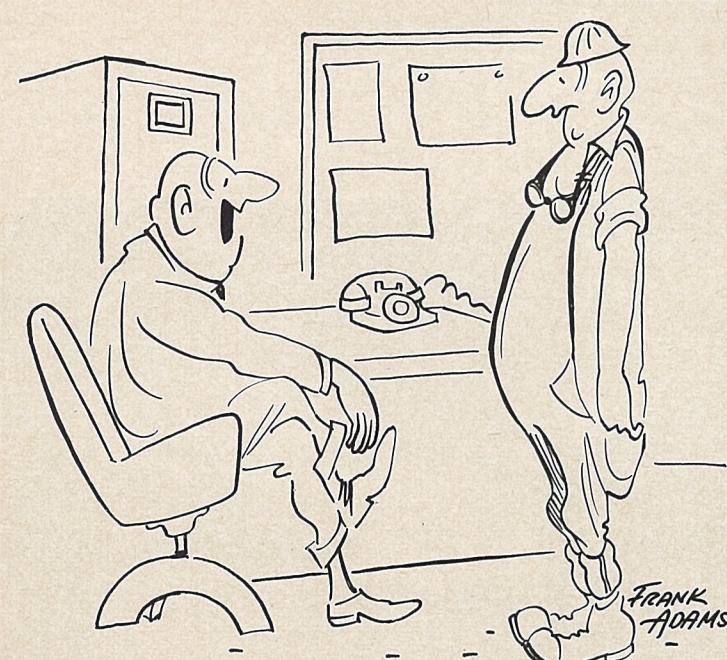
As president of the national SHARE organization, Ferber will conduct the convention sessions to be attended by approximately 300 people representing more than 100 computing centers. SHARE sets standards and pools working efforts so that computing groups can achieve the best use of certain IBM digital computers.

Also attending from Convair SD is Dr. C. J. Swift. Astronautics sent Dr. P. E. Lewis, T. R. Dines, and D. B. Parker. Two delegates each were to represent Convair Fort Worth and Electric Boat Division.

Convair Arranging Tours of 880 Line

Convair SD's field representatives are being progressively called home from their posts in various parts of the world to become familiar with the 880 and to help with the indoctrination of customers at home base before going back into the field again.

Besides their formal presentations, members of the training sections are often called on for lectures on specific phases of the 880 on behalf of other Convair departments. They also assist in plant tours for visiting groups and always have a big welcome sign out for anyone who wants to learn about Convair's latest product.



"When you got married and had six kids, I thought you had settled down . . . now what's this I hear about your needing more money?"

CONVAIRIETY

Orphan Boy From Korea Adopted by Convair AV Family

Although Korea and Antelope Valley are far apart in both distance and customs, a charming little 2½-year-old boy has bridged both gaps to make himself at home with a Convair family.

The distance was bridged by a 22-hour flight from Korea aboard a Northwest Orient Airlines plane, and the transition from life in a Korean orphanage to life in an Antelope Valley home was easily accomplished with the aid of a new father, mother, two sisters and a brother.

On hand to greet their newly-adopted son and brother when he landed at Los Angeles International Airport at 5 a.m. Jan. 15 were Mr. and Mrs. Bruce Sunde and their three children, Sally, 9; Sandy, 6; and Bruce, 3½. Sunde is in charge of special projects at Convair Palmdale facility.

The newcomer, whose Korean name, Duk Su-Lee, was changed



VISITOR—Mr. and Mrs. Bruce Sunde with newly-adopted son, Michael Benedict. "Ben" is making himself at home at Sunde's desk in Convair Palmdale, Dept. 324.

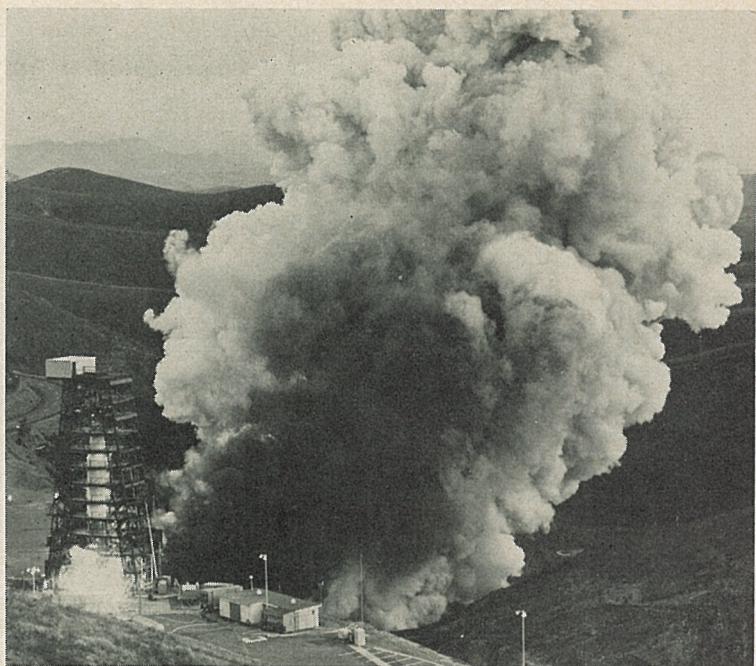
to Michael Benedict when he was christened at a Catholic orphanage in Po-Hang, Korea, has been nicknamed "Ben" by the Sundes. He is the child of an American father and Korean mother and has been cared for at the orphanage since he was six months old.

His adoption by the Sundes was arranged through the Catholic Welfare Bureau. Ben and 11 other orphans en route to new homes in the United States traveled as far as Seattle in the care of a Catholic nun. An airline official took Ben under his wing for the Seattle to Los Angeles flight.

Sunde describes his new son as a bright and cheerful child in good physical condition. The youngster has adapted himself readily to his new surroundings, enjoys American food, and in just a few days time had already picked up quite a number of American words such as "Hi," "Mama" and "Daddy." He is particularly adept at the good old American custom of shaking hands and saying, "How are you?"

Sally, Sandy and little Bruce (none are adopted) are proud of their new brother and find him very entertaining, Sunde stated.

Ben's arrival culminated a waiting period of two years during which the Sundes were seeking to adopt a Korean orphan. The expiration of the Refugee Law and the requirement for registration when the new law went into effect accounted for part of the delay, Sunde explained, and a further postponement resulted when a child previously selected became unavailable for adoption. The actual waiting time for Ben was just eight months from the time the Sundes were provided with a brochure describing and picturing the little boy.



CLOUD MAKING—Unusual weather conditions, plus an unusually long Atlas engine run (4 to 5 minutes) recently at Astronautics' Sycamore facility produced cloud that hovered overhead for long time.

University of California Extension Faculty Includes 25 San Diego and Astro Instructors

Twenty-five Convair San Diego and Astronautics engineers and mathematicians are included on the faculty of the University of California Extension's spring program.

From Astronautics are: Jack J. Block, training specialist; Carl G. Erickson, senior electronics engineer; Edward M. Getzoff, mechanical engineer; James J. Herman, senior electronics engineer; John E. Leib, senior dynamics engineer; Philip J. Swanson, group engineer; E. Ward Cheney Jr., senior research engineer; Allen A. Goldstein, design specialist; James F. Haskins, senior research engineer.

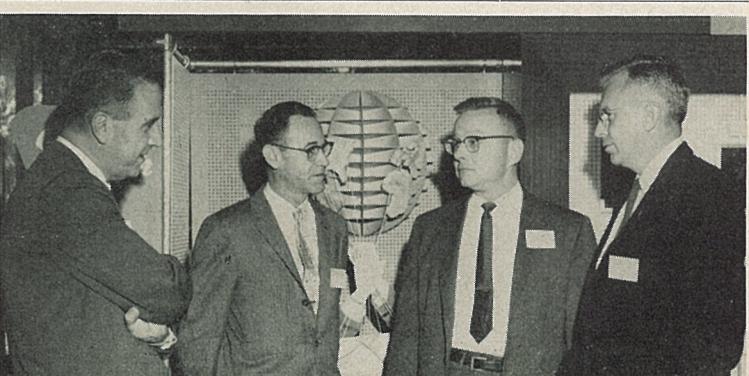
Also Ta Li, design specialist; Jack M. Maughmer, design specialist.

Convair SD instructors are: Harry G. Cooper, numerical control engineer; Glen M. Dodd, senior electronic engineer; Robert M. Kuhns, assistant flight test group engineer; Samuel A. Milliken, senior dynamics engineer; Ching H. Yang, senior dynamics engineer; Hideo Yoshihara, head, theoretical aerodynamics.

Also Lester Kraus, design specialist; Leo Lapidus, senior research engineer; James P. Mitchell, research engineer; Theodore Rubin, senior research engineer; Charles J. Swift, design specialist; David B. Medved, design specialist.



FIRST LOOK—First photograph of Atlas missile assembly line at Astronautics plant was released this month.



CONFEREES—Discussing some of sessions at recent 38th Air Force-Aircraft Industry Conference are, left to right, Joseph J. Alkazin, Howard R. Kennedy, both Convair San Diego; William F. Funk, Convair Fort Worth, and Charles S. Brandt, Convair SD.

NEWS FROM OTHER DYNAMICS DIVISIONS

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair Ltd. of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., aircraft, missiles and space systems.

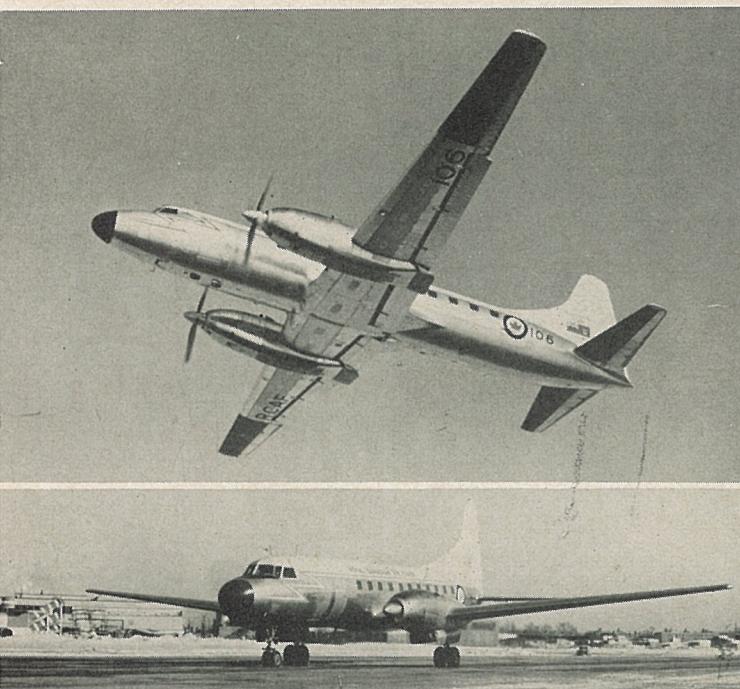
Electric Boat of Groton, Conn., submarines.

Stromberg-Carlson, of Rochester, N.Y., telecommunications, electronic equipment.

Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.

General Atomic of San Diego, Calif., nuclear research, development, production.

Electro Dynamic of Bayonne, N.J., electric motors, generators.



FIRST FLIGHT—Canadair's first pre-production 540 (a Convair 440 converted to turboprop power) flew Feb. 2 at Montreal.

BALL AND TICE GET ASSIGNMENT TO AID CANADAIR ON 540

SAN DIEGO—Two Convair SD men left last week for Montreal, Canada, to assist Convair's sister division, Canadair Ltd., in its turboprop program.

Homer Ball (Dept. 135) and Harvey Tice (Dept. 145) will be at the Canadair plant from three to six months to work with the people on the production floor during construction of parts for Canadair's new transports. Ball will assist in the fuselage section while Tice will be assigned to wing fabrication.

Both have had about 15 years experience at Convair SD in their own fields and were chosen as being especially qualified to help with the Canadair 540 and CL-44 program as it moved into production.

Only other Convair SD man now at Canadair is J. W. Dugan, engineering representative, who has been there since last April. John Ready, who assisted the engineering project office; E. L. Brown, quality control representative; and Ash Bishop, tooling representative, returned home before the first of the year after several months at the Canadian plant.

NEW WIND TUNNEL TO TEST RAMJETS

GROTON—A high speed wind tunnel is being built here by General Dynamics' Electric Boat Division to test ramjet engines for future aircraft and missiles.

Veterans' Hospital Acquires TRIGA For Medical Research

SAN DIEGO—The U. S. Veterans Administration Hospital at Omaha, Neb., has acquired a TRIGA reactor for use in medical research. Dr. Frederic de Hoffmann, general manager of General Atomic Division, announced.

Although General Dynamics' versatile and inherently safe TRIGA research reactors have been selected for use on five of the six continents, the TRIGA to be installed in Omaha will be the first to be used specifically for the advancement of medical research. The reactor will be a below-ground model with a nomi-

Canadair Flies '540' Turboprop

MONTREAL—Canadair's first pre-production 540 flew for the first time here Feb. 2.

It was in the air for three hours on its maiden flight with William Longhurst, Canadair's chief experimental test pilot, at the controls. Takeoff run was less than 2,000 feet. All-up weight of 48,834 lbs. included full fuel tanks.

This airplane, a Convair model 440 converted to Napier Eland turboprops, will be delivered to the Royal Canadian Air Force on loan. The second converted plane is scheduled to fly next month and the third in April.

STROMBERG BACKS MUSIC BROADCASTS

ROCHESTER—Programs of recorded symphonic music broadcast over the Northeast FM Radio Network now are being sponsored twice weekly by Stromberg-Carlson Division, according to C. Kenneth Juno, advertising manager of the Special Products Division. The programs feature recordings by the Boston "Pops" Orchestra.

SALES APPOINTMENTS

ROCHESTER—Appointment of William T. Lucas as manager of navigation systems sales, and Eugene T. Mueller as manager of communications and sonar sales in the Electronics Division of Stromberg-Carlson has been announced.

Astro Blood Credit Drops

For the first time since its inception, the Convair Astronautics blood bank program is faced with the prospects of going "in the red."

That's why an extra effort is being expended this week to get donors for a Feb. 26 blood bank planned at Astro. At that time the mobile unit of the San Diego Blood Bank will be on hand to accept volunteer donations.

"Increased employment, plus a higher than usual demand for blood and a small collection at the last bloodmobile visit has left our reserve at an extremely low point," said Joe Frivalsky of employee services.

Since Astro established its own program, bloodmobile visits have been scheduled each quarter. An effort is made at each visit to collect 200 pints to carry over until the next visit. Due to colds, sickness, etc., the October visit produced only 115 pints.

A canvass is now under way in Bldgs. 1, 2 and 3 for prospective donors. However, donors from other areas will be accepted. Volunteers from other buildings are asked to contact employee services, ext. 1111 or 2379, for information.

Astronautics set up the blood program as a service to its employees. All blood collected is credited to Astro at the Blood Bank. It is available to employees and members of their immediate families without charge.

SD Blood Credit Deeply in Red

A call for at least 300 blood donors at Plant 2 is out to replenish the depleted blood credit of Convair SD.

First-shift employees at Plant 2 are being asked to sign now for the next visit of the San Diego Blood Bank's bloodmobile next month (March 5). Cards are in the hands of all supervisors and foremen throughout the plant.

The bloodmobile will be located in the center section of Plant 2's Bldg. 3 from 10 a.m. until 2 p.m. on the collection date.

Ken Wulfemeyer of employee services, in charge of the campaign, said that Convair SD's blood supply has been completely exhausted and will be at least 150 pints in arrears by the March 5 date. A good turnout of donors is needed to keep enough blood on hand for the 50 pints a month used by Convair employees.

Astro to Hear Pace Feb. 25

Convair Astronautics Management Club members will get the word from the "top" Feb. 25 when they hear Frank Pace Jr., president of General Dynamics Corporation, at an El Cortez Hotel meeting.

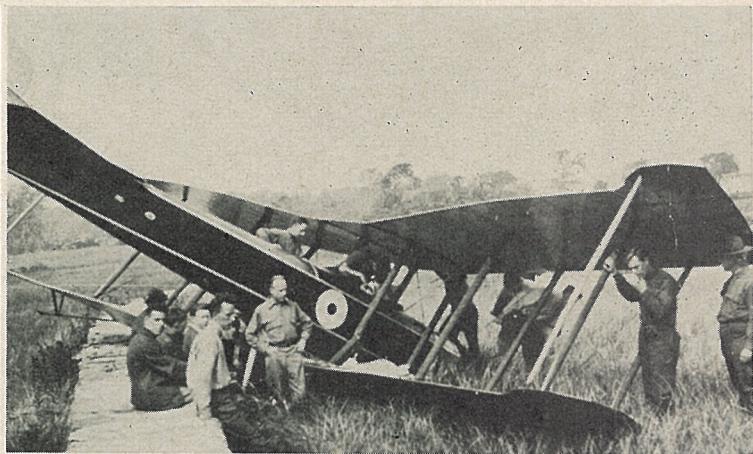
Also taking part in the management-studded program will be J. V. Naish, Convair president. Naish will present the 1958 President's Award, top honor paid annually for cost reduction at Astro.

A special invitation has been extended to ranking officials and board of management members of both Convair Division and General Dynamics Corporation to attend.

Industrial engineering is sponsoring the 6 p.m. (social hour) meeting in the Caribbean Room.

SECOND-SHIFTERS GET TV SHOW

First all-night television show in San Diego, pointed especially to second-shift workers, is being broadcast every Friday night and Saturday morning over Channel 6. Convair SD night owls now may see reruns of half-hour feature films from midnight to 6 a.m.



RECESS—Gallaudet Aviation School trainer is shown at end of a class session. Leo Bourdon, still with Convair, is at left, closest to camera. Below is launching of Gallaudet D-1 seaplane on Thames River, Norwich, Conn., in 1916.



Gallaudet Aircraft, a Convair 'Tributary,' Formed in 1917

(This is the second installment of a continuing history of Convair Division of General Dynamics Corporation. The first, in which the early aircraft development conducted by Edson F. Gallaudet was described, appeared Feb. 4.)

When the U.S. entered World War I, only five American firms had produced ten or more airplanes in their history.

However, when international developments made it clear that large military orders were in the wind, private capital began flowing into the industry. Edson Gallaudet's backing came from J. K. Robinson Jr., president of Ox Fibre Brush Co. of Maryland. The Gallaudet Aircraft Corp. was formed in January, 1917, with Robinson as president, J. G. Crawford, an Ox Fibre executive, as general manager, and Gallaudet as chairman of the board.

A new factory was ready in East Greenwich, R.I. in May of that year. One box car was sufficient to transport the firm's mobile assets from Norwalk, Conn.!

Through the balance of that year the company worked on contracts for four Army and two Navy craft. Also in that year the Gallaudet Aviation School was conducted near East Greenwich. Among the students learning to fly was Leo Bourdon, Dept. 99 at San Diego. Bourdon has been with Convair and "tributary" firms for more than 30 years and is Convair's senior citizen in point of continuous service.

Gallaudet's manufacturing pace quickened in January, 1918, upon receipt of a Navy order for Curtiss HS-2 pontoon-equipped biplanes. Production had reached a

plane a day when the war ended Nov. 11.

Gallaudet Aircraft's post-war story paralleled that of most other aircraft manufacturers. All looked in vain for a private market. Gallaudet brought out the "Chummy Flyabout," a two-seat sport machine, and the "Liberty Tourist," called the "last word in travel comfort, stability and beauty of outline."

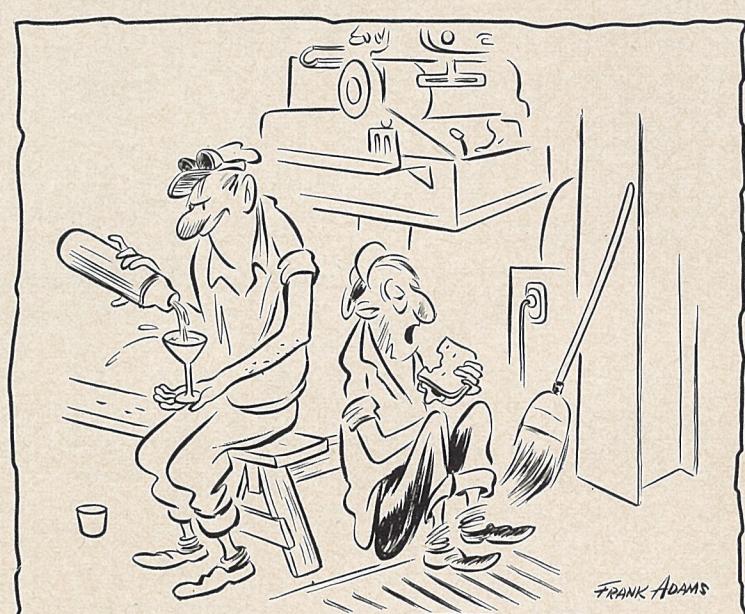
But buyers weren't there. Conversion work on thousands of DH-4 biplanes became the bone on which the industry gnawed. Gallaudet rebuilt four for the Air Service's first flying expedition to Alaska. The planes left Mitchell Field July 15, 1920, arrived at Nome Aug. 25, returned to a big welcome at Mitchell Oct. 25.

One of the company's most profitable contracts was conversion of DH-4s for postal service.

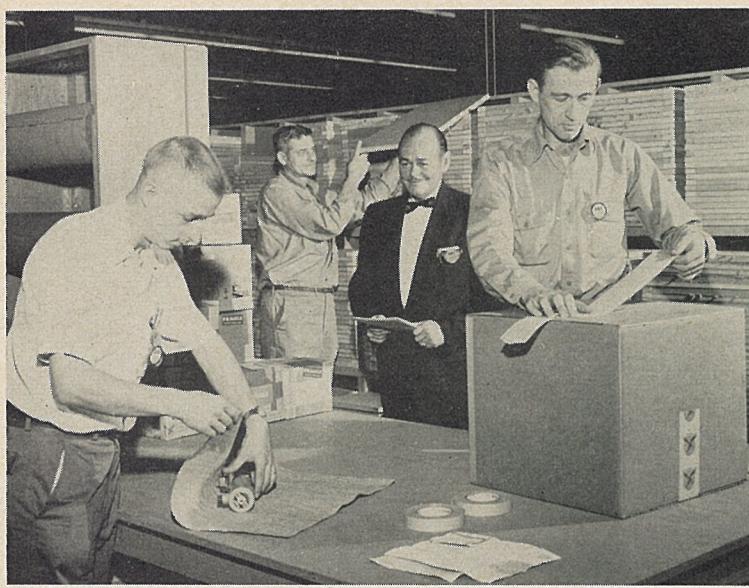
Richardson Named To Aircraft Board

Lawrence B. Richardson, General Dynamics Corporation senior vice president, was named to the 1959 board of directors of the Manufacturers Aircraft Association at its annual meeting last month.

The Association, composed of representatives of major aircraft companies, administers the patent cross-licensing agreement for the airplane industry in the United States.



"What was th' real simple way ta celebrate th' New Year that yer wife had figured out for ya?"



SHIPPING CENTER—Center where spares are shipped to Atlas bases has opened at Bldg. 4, Plant 1, SD plant. In packaging area are Jim O'Shea, Leon Biedel, George McDonald, assistant foreman, Bob Filter.

Product Support Shipping Center In Operation at SD's Bldg. 4

Convair Astronautics has taken another step forward with the opening of a product support shipping center.

Operations are a part of the support supply function which takes up most of the south end of Bldg. 4 at San Diego Division's Plant 1. About 8,000 square feet of space at the extreme south end of the building is being used for actual shipping facilities.

Actual packaging and shipping work began shortly after the first of this year.

Through its support center, Astronautics will lend direct assistance to Air Force units receiving the Atlas ICBM as an operational weapon. At present, personnel assigned to the center are also assisting in certain research and development operations while helping to build various types of training aids.

The support center under W. W. Pierce as manager is comprised of two major functions, maintenance and supply. The latter is the responsibility of K. R. Aiken, recently named chief of support supply.

Astro has had a related supply function in operation for some time. It was known as "GFP" (Government Furnished Parts). This organization was directly assisting research and development of the Atlas, while planning for what is called the IOC (Initial Operational Capabilities) support program.

Shipping is the immediate responsibility of George McDonald, under F. L. Shuter, general supervisor. Although the initial shipping force includes only

about a half-dozen men, further expansion is planned.

A major advantage in having the shipping operation located adjacent to supply storage areas will be to curtail transporting of parts and materials from point to point before actual shipping. This will cut handling time and give Astro the ability to react swiftly to a vital support program.

In addition, Astro will have the added advantages of having its shipping operation located adjacent to Lindbergh Field from which larger aircraft may airlift supplies.

Later this year the shipping center will be manned 24 hours each day.

Live Models Target For Photographers

Twenty-five members of the Astrolens reported full negative holders following a Feb. 9 model shoot featuring Marcia Power (Dept. 545-3) and Fran Wilson (Dept. 578-3) as models.

Ken Rinker, Astrolens commissioner, this week urged all members to begin preparing for the Feb. 23 meeting and the first quarterly photo contest of 1959.

OLD GLOBE PLAY TICKETS ON SALE AT TWO-FOR-ONE

The entire house of the Old Globe production, "Waltz of the Toreador," has been made available for Astro theater-goers on Wednesday (March 4).

CRA reduced-priced tickets at two-for-one at \$1.75 and \$2.25 are on sale at employee services, Bldg. 8.

Log Book Entries

Promotions

ASTRONAUTICS

Promotions and transfers to or within supervision effective Feb. 2:

Dept. 120-3, Communication: To asst. supervisor group reproduction planning, M. A. Young.

Dept. 211-1, Purchasing: To buying supervisor, J. C. Dingman, E. R. Gaynor.

Dept. 220, Manufacturing Control: To manufacturing control supervisor, S. E. Cleghorn. To manufacturing control foreman, G. F. Bailey, E. E. Darling, M. N. Delperdang.

Dept. 280-3, Inspection: To inspection supervisor Gr. V, R. B. Cunningham. To inspection asst. supervisor, Gr. III, R. H. Sparks.

Dept. 321-7, Support Engineering: To asst. supervisor—field service, R. J. Meeker.

Dept. 322-7, Support Publications: To support publications asst. supervisor, J. L. Howard.

Dept. 343-0, Support Manufacturing Control: To support tooling supervisor, H. Nisbet.

Dept. 344-3, Support Operations: To asst. foreman Gr. V, N. F. Danielson.

Dept. 510-1, Project Support Office: To asst. project engineer, D. J. Schroeder.

Dept. 532, Test Labs: To group engineer, J. D. Peterson, R. G. Roscoe.

Dept. 549-5, Data Transmission: To asst. design group engineer, M. R. Barlow.

Dept. 731-0, Machine Shop: To asst. foreman Gr. V, D. J. Haldaman.

Dept. 732-0, Sheet Metal: To asst. foreman Gr. III, R. E. Bourne.

Dept. 775-0, Trainer Assembly: To asst. foreman Gr. V, R. S. Moore.

AFMTC

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 573-1, Convair Operations: To test conductor-test base, R. C. Lynch. To asst. test conductor, G. G. Christ. To chief of industrial relations-test base, C. K. Gudell.

VANDENBERG AFB Dept. 350-1, Activation Support: To activation support supervisor, L. A. Chambers. To activation support group supervisor, T. H. Smith.

Dept. 576-4, Convair Operations: To chief of inspection-test base, W. H. Behrens. To asst. test conductor, R. G. Daly. To cost control supervisor, L. T. Lawler. To asst. flight test group engineer, E. C. Sims.

WARREN AFB Dept. 351-0, Convair Operations: To material control asst. supervisor, E. G. McCleave Jr. To manufacturing control asst. foreman, M. Burright. To foreman Gr. V, W. M. Hassard, J. E. Kay.

Dept. 341-2, E. M. Lizararas; Dept. 771-0, H. D. Hill.

Ten-year: Dept. 110-0, E. H. Boardman; Dept. 211-4, H. E. Dredick; Dept. 214-1, Lowrette, G. McKenna; Dept. 451-0, H. B. Jewell; Dept. 732-0, J. V. Vecchio; Dept. 772-0, Julie Ereneta.

AFMTC Service emblem due Feb. 17: Ten-year: Dept. 573-4, C. E. George.

Service emblems due during the period Feb. 16 through Feb. 28:

Twenty-year: Dept. 270-1, G. L. Helpling.

Fifteen-year: Dept. 341-2, E. M. Lizararas; Dept. 771-0, H. D. Hill.

Ten-year: Dept. 110-0, E. H. Boardman; Dept. 211-4, H. E. Dredick; Dept. 214-1, Lowrette, G. McKenna; Dept. 451-0, H. B. Jewell; Dept. 732-0, J. V. Vecchio; Dept. 772-0, Julie Ereneta.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair Operations: To test conductor, W. R. Jackson. To asst. flight test group engineer, E. A. Baldini, C. Fowler, J. H. Fox Jr., K. K. Wilcox.

Dept. 571-1, Convair

CRA Sports & Recreation Convairity

Application Blanks Out For Plant Keg Tourney

As an assistance to keglers hoping to beat the Feb. 20 deadline for entering the first annual Astronautics CRA bowling tournament, a special tournament committee has been set up.

Commissioners Jack Boyle and Willard Brassell, who is also tournament manager, indicated this week that members of the tournament committee have been supplied with application blanks. They will have them available through the Friday (Feb. 20) deadline for entering.

Committee members include: at the Astro plant, Nancy Tatum, Ed Low, Elston Dennis, Bill Geopforth, Ery Campbell, Ed Frankowski, Vic Salgado and Brassell; at Plant 2, Jim Rothwell; at Barnard School, Boyle and Rudy Romero; at Sycamore Canyon, Lorraine Sweeny; at the Mallen Bldg., Lorraine Weight. In addition, applications are available through employee services, Bldg. 8.

Action will be over the first two weekends of March (7-8 and 14-15) at Clairemont Bowl.

Through special arrangements with the American Bowling Congress, any Astro employee may enter whether he or she is a sanctioned bowler or not.

Events will include singles, doubles, all-events and team competition. Handicaps have been established to give women keglers equal opportunities to win awards.

Pre-tournament estimates are for a field of over 1,000 bowlers. More than 100 awards will be presented in various events. Which means that something like one out of every 10 keglers will receive an award.

While Astro bowlers have participated in their own leagues for

Coiners Will Gather At Astro Cafeteria

Astro Coiners will gather at 7:30 tonight (Feb. 18) for a regular meeting set for the Astro cafeteria.

Special guest will be Donald Cruthers, a local coin shop owner, who will discuss "Grading of Select Coins" with the Astro collectors. Also on the program will be a discussion of rules and regulations governing the operation of the Coiners.

Some 20 coin collectors of all ages have been participating in past events. The Coiners welcome all collectors at their meetings and special events.

CRA Discount Tickets

The following are available at discount rates through employee services, Bldg. 8.

DECALS — Astronautics window stickers, 10 cents each.

DISNEYLAND — Magic Kingdom Club cards allowing discount purchases of tickets.

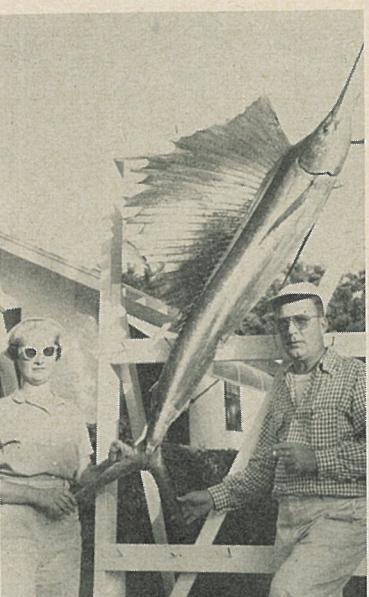
MARINELAND — Discount tickets for all ages.

Six Trailer Owners Attend First Meeting

A small but enthusiastic group of trailer owners was on hand Feb. 5 for an organizational meeting of a proposed Astro Travel Trailer Club.

The six trailer owners agreed to bring in two additional members each for the next meeting, set for 7:30 tonight (Feb. 18) at the Astro cafeteria. Art Wrightson (Dept. 181-1) urges all owners of small trailers to attend. Plans call for setting up operating schedules and planning of weekend jaunts for members.

two bowling seasons, this tournament is the first official plant-wide event. It will mark the crowning of a whole flock of new champions who will reign as plant champs until bettered in future affairs.



SAIL HO!—Mrs. C. F. Smith, wife of Astro buyer at AFMTC, poses with her husband and seven-foot, two-inch sailfish. Catch was landed on Atlantic trip out of Stuart, Fla., by Mrs. Smith. Party also caught six dolphin.

Basketball Players Urgently Needed by City League Teams

Injuries and shift changes have made serious cuts into Convair Astronautics' ranks of experienced basketball players. As a result, more are needed to bolster CRA representatives in the final round of action coming up.

Astro has three teams in organized San Diego competition. They range from the top City league down the line, dependent upon the class of teams entered. At this time players are needed for all teams.

Those interested are asked to contact Ray Mendoza, ext. 1111, for information.

Plans Taking Shape For 'Atlas Rallye'

Plans are beginning to shape up for the first annual "Atlas Rallye" to be staged by the Astro Sports Car Club, Bill Rector, CRA commissioner, announces.

The April 12 event is planned as a seven-hour navigational contest. Rector has been named rally master.

Several Astro drivers were honored at the recent San Diego Council of Sports Car Clubs dinner-dance. Rector was installed as president and also received an award for second place standing in all 1958 competition. George Blondin (Dept. 595-1) took tenth. Rector also finished second in the 1958 Southern California Championship standing with Blondin taking fourth in navigator's standings.

Astronautics Plans To Field Net Team

Convair Astronautics is planning to send a representative tennis team into action within the next few weeks, Commissioner Larry Chambers reports.

In late February (date yet to be set) Astro will meet a General Atomic team. Around the first of April Convair Pomona is expected to send a team to San Diego for the first of a series of home-and-home matches with Astro.

Scholarship Deadline Set

March 17 has been set as a deadline for entering the first annual Convair Astronautics Management Club scholarship program, according to O. W. Huff, committee chairman.

Two awards of \$500 will be presented, one to a girl, another to a boy. The latter is known as the "Dr. Hans Friedrich Memorial Award." In addition, runners-up will be awarded \$100 Savings Bonds.

The sons and daughters, either by birth or adoption, of all Astro employees working in San Diego County are eligible provided they graduate from high school in February or June of this year.

Applications are now available throughout the county at all high schools. When submitted, they must be accompanied by a one-page resume of the applicants' outside interests, activities and college aspirations.

PISTOL CLUB POSTS NEW RECORD HIGH

Despite a steady downpour during the day Feb. 8, Dave Reichenbacher posted a new high score for the Astro Pistol Club with a 297 total out of a possible 300.

Reichenbacher, a member of Astro's plant protection force, also took his second double in as many months in winning the center fire National event and the .22 Police event. It was in the latter event that he posted the new record.

Other winners included: Roland Schneider (Dept. 454), sharpshooter; Hank Schleibaum (Dept. 130-1), marksman; both in the .22 Police event. Russ Oliver (Dept. 131) and Bill Geopforth (Dept. 772) placed second and third in the National.

Volleyball League Considered by CRA

Astro CRA has had several queries on forming a regular volleyball league with weekly games.

If six teams can be lined up, CRA will sponsor a league, making arrangements for game sites, etc. If only a few players are interested, then a CRA-sponsored team could be organized to engage in outside play.

Ray Mendoza of CRA indicated this week that space can be obtained in the Federal Building, Balboa Park, for both practice and league sessions.

Any groups of individuals interested may contact Mendoza at ext. 1111.

SPORTS CAR CLUB TO VIEW MOVIE

Astro Sports Car Club will hold a regular meeting at 7:30 p.m. Feb. 26 in the Astro executive dining room. Films from the "1958 Sebring Road Races" will be shown.

Starting time for the 18-hole event, which will actually consider players' best nine holes, may be reserved through March 5. Call Bunny, ext. 1111, for starting times.

Green fees for Astro golfers have been reduced to \$2.50.



ASTRO TWOSOMES—"Ladies Night" meeting of Astro Management Club brought out 940 persons recently. Overflow crowd was accommodated in extra dining room. Speakers were Manager J. R. Dempsey and R. F. Smith, chief of educational services.



VISITING PROS—Mike Souchak and Billy Casper (center, left and right), two of top golfers on pro circuit, were guests at Convair Golf Club meeting Jan. 30. Getting some professional advice are Convair SD CRA Golf Commissioner Ken Wulfemeyer (left) and Art King, Astro Golf Club commissioner.

Competition Is Red Hot In Astro Shop League

and 36-28 victory over Handling Equipment.

Astro's Satellites dropped an 87-25 Metro league game to the Sparks. The Rockets won an Industrial league battle with Ryan, 54-51, then lost to Rohr, 41-33. In other action during the past two weeks the Astronautics team of the City league stopped Chollas Merchants, 59-52, and lost to the Convair Eagles in a 62-58 game.

Sheet Metal Leads Good Housekeepers

Sheet metal (Dept. 732), a newcomer to monthly good housekeeping standings at Astronautics, came through to pace the 15 reporting departments during January.

Fabrication functions entered the contest for the first time officially in January. Sheet metal had only three cleanliness violations charged against it for an average violation per employee mark of .034.

Safety contest standings found seven departments, receiving inspection, manufacturing control, machine shop, plant engineering, test labs, stores and traffic, and trainer manufacturing tied for first.

Rockhounds to Hunt In Calexico Region

Rockhounds from Convair Astronautics have scheduled a one-day trip to the Calexico area this weekend in quest of petrified wood.

Field trip chairman Ray Beard and his assistant, George Koehler, mapped details for the Sunday (Feb. 22) jaunt. Those attending will meet at a point seven miles below the juncture of Highway 80 and Route 98 on the latter route.

Next regular meeting of the group will be March 5 at the Astro cafeteria.

Underground Facilities Give Atlas Base Look of Simplicity

Vandenberg Air Force Base, ballistic missile training center for the Air Force, and "home" to more than 400 Convair Astronautics employees, is somewhat like a nervous chameleon these days—ever changing.

A multi-million dollar construction and renovation program there brings about a new look almost daily. New homes, offices and work areas, new roads and an almost-complete landing strip are noticeable additions.

Astronautics personnel, members of Dept. 576 under W. F.

Miller, VAFB manager, are also seeing constant changes. Their area recently received new gravel parking lots. Office buildings have been partitioned and otherwise improved.

However, the "business end" of Vandenberg, the launching site for ballistic missiles like the Atlas ICBM, probably show the most advance.

A good example is the first launching site for the Atlas. It is called "Launch Complex 65-2" or simply "65-1" by Astro people. It is located on a sloping

hilltop overlooking the Pacific Ocean some 300 miles north of San Diego. Across a wide valley is "Launch Complex 65-2," another Atlas facility under construction.

To the observer accustomed to the facilities at test base operations at the Atlantic Missile Range in Florida, Missile Static Test Site and even Sycamore Canyon in California, Vandenberg offers some startling contrasts. It appears to be a model of simplicity. Missing are the array of fuel tanks, support

buildings and many other separate structures. At Vandenberg these are underground.

"65-1" consists of three launching sites (Pads A, B and C) set in a triangle and centered by a single blockhouse. Each pad is about 1,500 feet from its neighbor. A single set of instruments and controls in the blockhouse can be utilized for all three pads. Arm-like covered runways containing wiring and cables stretch from the blockhouse to each pad, going underground as they near the actual launch site. A single

tower stands near the blockhouse to hold television cameras.

Each pad consists of a huge concrete platform, much longer than it is wide. Walking out on this ramp-like structure is much like moving along the flight deck of an aircraft carrier whose bow is anchored on land. Near the highest end is a gantry tower mounted on rails. Below it is the launch mechanism and below that a flame bucket leading to concreted canyons below. Underneath the platform is an unique "built-in" area. It contains rooms for offices, rest rooms, fuel tanks, instrumentation terminations, safety devices and storage. Steel doors seal off these areas at launch time. An elevator climbs up one side of the gantry tower. There are spaces for checkout trailers, floodlights, camera installations and other equipment outside. Over a nearby hill is a power station.

The blockhouse is also in contrast to similar equipment at other test bases. It, too, is simple (at least, by comparison).

"To better understand our facilities it is necessary to know the basic operational differences between this and other test bases," Miller said.

Other Astro-operated test facilities are geared to research and development. To get a clear picture of how each system and component functions requires elaborate instrumentation and recording devices. These are found both on the missile and launching facilities. And to check and recheck this equipment is a time-consuming project. As a result, countdowns are lengthy, often extending over many hours.

However, the end justifies the means, since by these development tests Convair is able to determine necessary changes in the missile and its support equipment. The ultimate goal is to present the Air Force with a "debugged" weapon system, one ready for action at all times.

"At Vandenberg we concentrate on the operational," Miller explained. "That is, we are installing facilities like those Air Force men will handle when they take over operational bases. We are presenting the Air Force with a proven system, one ready for instant use."

Toward this end, Vandenberg is contemplating countdowns in terms of minutes, not hours!

Another unusual aspect of Vandenberg operations calls for "one-of-three" programming. Here's how it works:

A complex, like 65-1, will have three Atlas missiles ready for firing. Countdowns started on one pad will be carried swiftly through to launch unless something happens. If there is evidence of malfunction, that countdown will halt immediately. Launch control will be swung to another pad and a second countdown started.

"Naturally, investigations will follow malfunctions. If major corrective work is needed, the missile will be removed and another erected in its place," Miller said.

"But our primary effort will be directed toward activating a facility that can be used to fire one or more missiles."

Vandenberg AFB is a ballistic missile training base responsible for bringing together and training future operational crews. At the same time it will help establish initial operational capabilities for the Atlas and all its support equipment.

Future Air Force missile crews have been training at Convair Astronautics for some time. In April the first major "graduation" occurs. Officers and technicians will emerge with a thorough training in individual systems and components. They then move to Vandenberg for further training. Called Integrated Weapons System Training, the program will weld together the individual skills of the men into compact crews.

All training of Air Force personnel is the responsibility of Astro's product support.



ATLAS TRAINER—Vandenberg AFB missile training center, home for 400 Astronautics folk, is developing rapidly. Top center, taken from atop gantry tower, shows bird in another tower, with blockhouse at right. Below, center, is tower up close, illustrating how fuel tanks, etc., are underground. At top right are G. A.

Calvert, chief of product support, and W. F. Miller, Astro base manager at Vandenberg. Below left, Col. W. S. Rader, commanding 704th Strategic Missile Wing, and Col. J. J. Easton, commanding 576th Strategic Missile Squadron, are in blockhouse with Calvert and R. J. Meeker, principal field service engineer.

First Ground School For 880 Customers Given 'Dry Run' at SD

Production flight engineer-instructors at Convair SD are in the midst of a five-week "dry run" of the first ground school courses to be given to 880 customers.

The first week in March will see two courses starting simultaneously for FAA personnel and Convair flight people. The two-week FAA course will be given to 16 officials from Washington, D. C., Oklahoma City, and the Los Angeles regional office to familiarize them with the 880 jet transport. The second course will be five weeks for 30 pilots, flight engineers, and flight electronics engineers of SD production flight department.

TWA representatives will be here in June for the first customers course and Delta flight crews are scheduled to take the same ground school training this September.

A second course for TWA will run through August.

All production flight training is in charge of P. H. Selby, supervisor.

First Pilots Check Out In New Cockpit Trainer

First cockpit procedures trainer ever built for jet transport training has been installed at Convair SD and was ready to go into operation this week training future Convair 880 pilots.

The quarter-million dollar pilot aid, built by Burton-Rodgers, Inc., of Cincinnati, Ohio, has been set up in the customer training area on the first floor, Bldg. 4, in Plant 1. There Convair SD production flight pilots will be the first to use the trainer to learn first-hand the intricacies of 880 systems.

"This trainer is the best of its kind that we've ever seen," remarked W. B. Harwell, manager of SD production flight. "It will substantially reduce the amount of transition time which otherwise would be necessary for training in the airplane itself. It will cut from three to five hours from the 15-hr. period of actual flying normally necessary for checkout."

A. P. Wilson and W. D. Carrier, senior test pilots of production flight, will be the first SD

pilots to step into the full-scale replica of an 880 cockpit for the 15 to 20-hr. training course. (Production flight engineer-instructors will be taught the operation methods by Burton-Rodgers' representatives so that they can carry on the training.)

Pilots will be able to do everything but fly. In every other way, the Burton-Rodgers trainer, built especially to Convair's specifications, duplicates the 880 cockpit. Instruments respond to operating controls exactly as in actual flight, explained P. H. Selby, production flight training supervisor.

Cockpit familiarization training will check out pilots in location and purpose of all switches and controls which operate 880 systems—power plant, fuel system, hydraulic system, air conditioning and pressurization, automatic pilot, electronics equipment, adverse weather and electrical systems.

Besides the three normal stations for pilot, co-pilot, and flight engineer, a fourth position is occupied by an instructor with a separate control panel. The instructor can test the students' alertness by throwing in various faults—"failure" of a section of the hydraulic system or a "fire" in a nacelle.

Thus, before actually flying a real 880, pilots and crews can learn to react as a unit in emergency situations.

Although maintained and operated by production flight department, the trainer will be available for training of other Convair SD groups—engineering flight test pilots, customer service representatives, and customer flight and ground crews.

Carl Lehmann, Burton-Rodgers project engineer, heads a team of Edward Bishop, Theodore Messer, and John Hutchings now at Convair SD to put the trainer into operation and instruct production flight men in its use.



TRAINER WELCOMED—Carl Lehmann, Burton-Rodgers, Inc., project engineer (far right), explains controls of the 880 cockpit procedures trainer to P. H. Selby, SD production flight training supervisor, and R. L. Mellison of SD purchasing upon its recent arrival at Convair SD.

Simpler Wing Panel Designed

A new simplified design for production of B-58 wing panels—one which design engineers believe will be both better and less costly—was under intensive study this week at Convair Fort Worth.

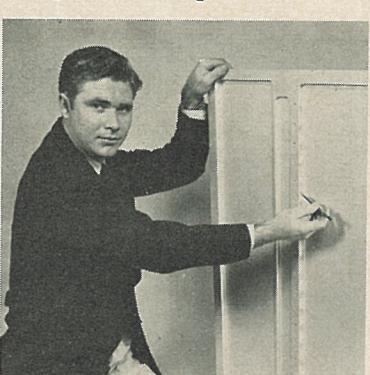
The new design, in the opinion of engineers, will give B-58 wing panels improved heat resistant characteristics, in addition to providing savings in time and money.

The secret is in the development of the one-piece integral skin-slug combination panel.

In the new panel, one piece of metal is etched chemically in such a fashion that one surface becomes a skin, according to M. S. (Marv) Howeth of manufacturing research.

Cross members remain to form the slug. Inside these, honeycomb is fitted to provide the core. Then all that remains is to attach a single skin to complete the panel.

D. L. Allie, senior manufacturing research engineer, said that with the new method, contour panels can be manufactured, while with the old method only flat panels were possible.



NEW DESIGN—New one-piece integral skin-slug combination wing panel designed at Convair Fort Worth for B-58 is shown here by M. S. (Marv) Howeth of manufacturing research.



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

Convairity

Vol. 12, No. 8

Wednesday, April 15, 1959

SAN DIEGO, POMONA, ANTELOPE VALLEY, VANDENBERG AFB, CALIF.



AFMTC, CAPE CANAVERAL, FLA., FORT WORTH, TEX.

Hospital Fund Drive Ahead For SD, Astro

Convair San Diego and Convair Astronautics will participate in the "Crusade for Life" fund-raising campaign to provide vital expansion for the San Diego area's three major hospitals.

Convair will conduct an in-plant drive this summer, as will virtually all other industrial concerns in the city, J. V. Naish, Convair president, and member of the executive committee of the Tri-Hospital Association, announced.

"Only a desperate community situation would persuade me to permit a campaign over and beyond our regular Con-Trib-Club solicitations," Naish explained. "However, this is a condition of such vital concern to all of us that we must do our utmost to correct it."

"Crusade for Life" concerns three privately endowed and operated non-profit hospitals, Mercy Hospital, Donald N. Sharp Memorial Community Hospital and Scripps Memorial Hospital.

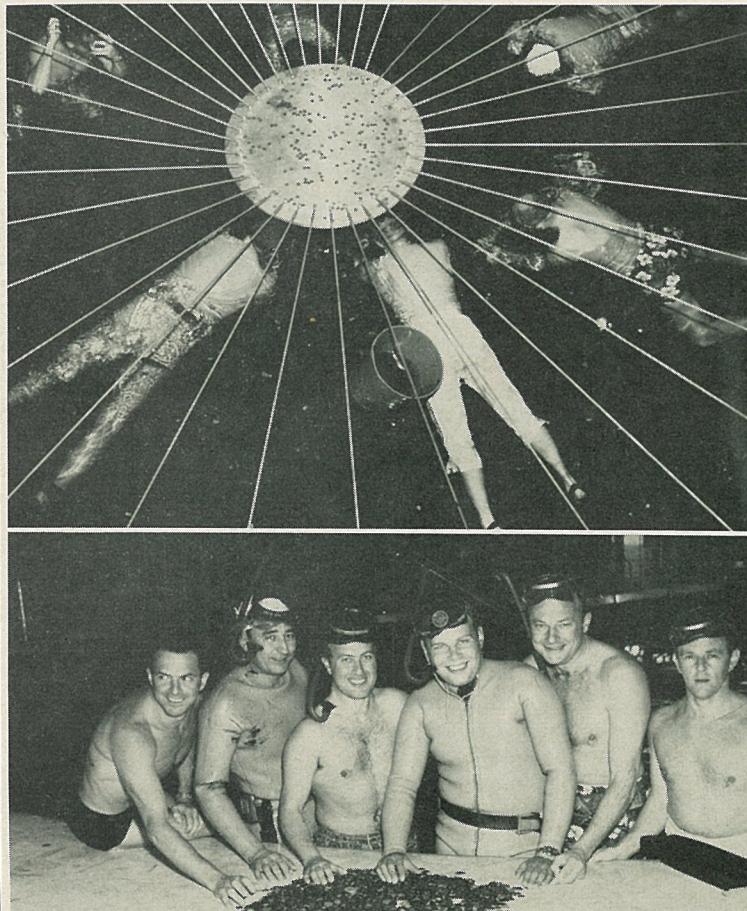
Combined, they now have 714 beds. The "Crusade for Life" campaign aims at raising \$10½ million for 417 additional beds and to remodel and reconstruct Mercy so that its present 325 beds will not be lost to the public through cancellation of Mercy's accreditation by the State Department of Hospitals.

"The problem is simply that San Diego population has far out-stripped its hospital facilities. These three hospitals were forced to turn away more than 2,000 patients last year solely because they did not have rooms. Some of these patients undoubtedly were Convair people," Naish continued.

Mercy, Sharp and Scripps are non-profit. They actually operate at a deficit. It costs more to run them than they take in. They are maintained largely through the generosity of a few individuals or the active work of a dedicated group such as the Sisters of Mercy or some other church-affiliated organization.

"Operating in this manner, there simply are no funds for expansion to keep up with the growth of the city," Naish said.

Heading the industrial division of the drive is R. H. Biron, Convair vice president-administration. Also serving in this division is Julian L. Ashe, representative of the International Association of Machinists.



TREASURE—Reflection pool at Astro's Bldg. 2, long a target for coin tossers, yielded \$74.92 when skin divers went to work recently. Jorge Zorrilla, Joe Walker, Bob Nicholas, Keith Kaonis, Phil Swanson, Herb Boynton count money that will be set aside for needy. Photo by Astrolens' Ken Rinker.

Massive Relocation Program Gets Going

Convair Astronautics personnel in some areas began shifting about this month as a massive relocation program slated to continue throughout this year got under way.

Astronautics is in the midst of an expansion program, with enlargement of factory facilities, the construction of a new tool building and the addition of a large two-story office building.

When these facilities are completed this year they will give Astro much additional space. However, in the interim it will be necessary to move various groups about to rehabilitate and ready specific areas for future permanent occupants. Assisting these moves will be space made available in both the Westgate and Aztec warehouses.

The latter begins receiving some shipping and traffic employees over the coming weekend as 12,400 square feet of space

is vacated in the factory. At the same time, offices for this function are being relocated.

Several tasks have already been accomplished. Included are: some purchasing department moves to Westgate; relocation of engineering material stores; relocation of distribution files; and rearrangement of the engineering library.

Within the next few weeks many engineering groups will shift about. Included are those (Continued on Page 2)

Astro Hosting Many Visitors

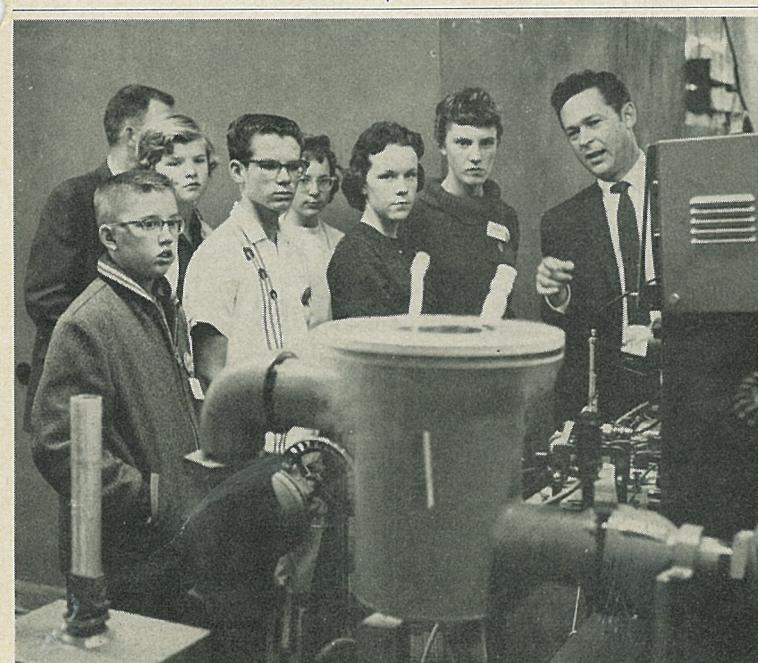
Convair Astronautics has played host to an unusually large number of top military and civilian officials during special visits and presentations over the past few weeks.

Rep. Phil Weaver of Nebraska, a member of the House Appropriations sub-committee, was at Astro March 31 with a small party to take part in a briefing and factory tour.

Thirty-nine officers taking part in the University of Michigan guided missile training program visited Astro April 3. Included were Air Force, Navy and Canadian officers now working toward graduate degrees at Michigan.

A large party of visitors, including several members of the California Senate, visited Astro briefly April 4 as part of a city-wide tour. On that same day 33 Navy officers, attached to the Navy Bureau of Aeronautics training unit at North Island NAS, came to Astro for a presentation.

Astronautics also played host April 6 to a party of over 40 junior and senior high school students. Each student was a winner in some phase of the just-finished San Diego Greater Science Fair. They received a special presentation, then toured engineering test laboratories.



ABSORBING SIGHT—Possible future scientists, all winners in Greater San Diego Science Fair, pay close attention to Astro's Richard Camp explaining workings of engineering laboratory equipment. Group of students toured Astro as part of Fair program.

Astronautics EDITION

Serving Astronautics' San Diego plant and facilities at AFMTC, Fla., and Vandenberg AFB, Calif.

Astro news office, Kearny Mesa plant, ext. 1154. Vandenberg news contact, ext. 8-4148. AFMTC news contact, ext. 3038.

Atlas Joins B-58s And 880 Jetliner For Air Congress

An Atlas missile, two B-58s and a jet 880 were on exhibition at Las Vegas this week for the World Congress of Flight.

The Atlas is a traveling display belonging to the Air Force. It is transported from point to point in three sections and assembled on arrival.

An actual missile that has been through test series at MSTS, it has been specially modified for its present use. Carl Grindle and Al Braga of Astronautics engineering were among those coordinating the modification.

★ ★ ★

Five General Dynamics Corporation men will be on the program of the first annual World Congress of Flight at Las Vegas, Nev., this week.

P. M. Prophett, Convair SD assistant chief engineer-flight test, will speak on "Stability Objectives for Jet Transports," and Charles E. Myers, engineering test pilot at Edwards AFB will take part in the panel on VTOL-STOL aircraft.

L. H. Kottmeier, assistant sales manager of Canadair, Ltd., will discuss the CL-44 long-range turboprop and K. J. MacDonald, also of Canadair, will talk on the Canadair CL-41 pure jet trainer.

Lloyd M. Luke of Stromberg-Carlson will speak on "Air Traffic Control Data Link."

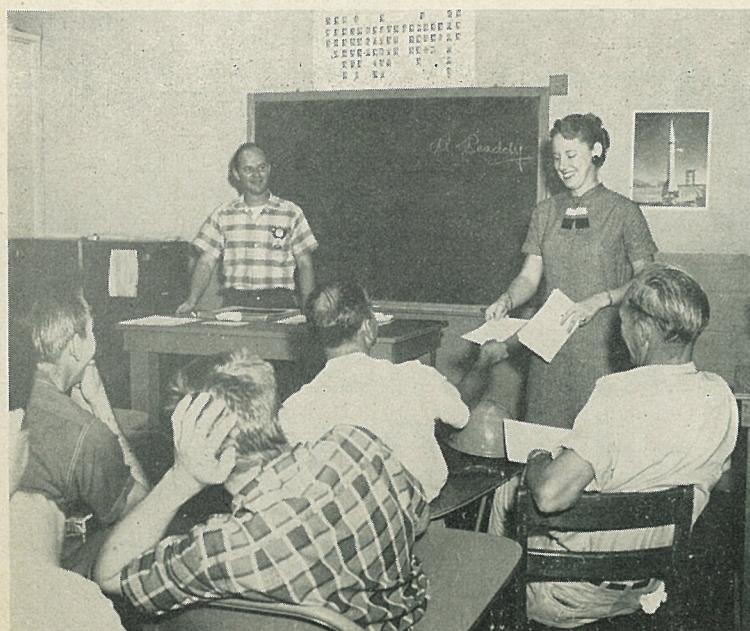
Attending from Convair will be J. V. Naish, Convair president; T. G. Lanphier Jr., H. C. Tafe, W. C. Keller, C. G. Wollcott, A. W. Abels, B. S. Jones, L. W. Fitzgerald, R. K. Gottschall, and K. S. Warren of General Offices; J. R. Dempsey, Astronautics Division manager, W. H. Patterson, and K. A. Ehrcke of Astro; D. H. Digges, H. J. Richardson, J. W. Knebel and Prophett of San Diego; J. G. Cosby, Fort Worth; L. D. Dolling of Pomona; and L. K. Murray and R. W. Warden of the Colorado Springs office.

Convair SD now has two 880s in flight status. Both ships were in the air at the same time last week. In addition to ship No. 3, on display at Las Vegas this week, ship No. 1 is flying out of Edwards AFB where Air Force is holding evaluation tests.

J. R. Dempsey, Convair vice president and Astronautics manager, also voiced a keen personal interest in CRA. He praised Council members and offered a special word of thanks to the Astro men, women and children (Continued on Page 2)



ON DISPLAY—Convair SD's second 880 jet transport to fly, plane No. 3, is at Las Vegas, Nev., this week on public display at World Congress of Flight. It will make a fly-by demonstration. Plane No. 1 is going through AF demonstration flights at Edwards AFB.



OFT REPEATED—Educational services staff at AFMTC has been doing yeoman duty during initial quarter of 1959 putting 526 of 962 employees through one or more of 18 classes taught. Here, Instructor Al Ready stands by while Nancy Hamilton passes out material to students during induction lecture.

Report Shows AFMTC Classes Prove Popular

An upswing in the number of student hours spent in Convair-conducted educational services classes at the Astronautics operation, Air Force Missile Test Center, has been reported for the first quarter of 1959.

Al Ready is educational services instructor assigned to industrial relations under Ken Gudgell, chief of industrial relations.

Students at AFMTC have spent 9,397 hours in class during the initial three months of 1959. They have taken part in 18 different classes ranging from instruction in various systems to simple induction of new employees and familiarization with new missile series. This represents something like one hour of every 50 worked at the Astro operation.

Astro has about 962 employees at AFMTC. Of these, 526 students have attended one or more classes during the initial quarter of this year, Ready reports.

For the entire year of 1958 some 31,174 student hours were recorded, according to educational services reports.



SUCCESSFUL—These skin divers recovered body of drowned angler recently at Lake Poinsett, Florida. Among group were the following Astronautics employees at AFMTC: Bob Green, kneeling right; Ken Quimby and Maynard Swanson, second and third men from left standing; and Ted Kaufman and Fred Graham, standing at right.

Convairity

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations. General Offices, San Diego, Calif., Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Grayce Fath, Helen Pemberton, Fred Bettenger.

Astronautics Editorial Offices, Bldg. 2, new plant, ext. 1154. Staff: Bryan Weickerhimer, news editor.

FW Editorial Offices, Col. 73C, ext. 2961. Mailing address: Convairity, Convair, Fort Worth, Texas. Telephone PErsing 8-7311. Staff: Bob Vollmer, news editor; H. A. "Pat" Baker Jr., Mary Beck.

Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Offices, Room 31, Bldg. 301B, Palmdale, ext. 337. Staff: Betty Lou Nash.

New Members Join 'All-Convair' Family

The long arm of coincidence has reached out to tap three Astronautics families lightly.

Two brothers, E. J. Jr. and W. H. Corcoran, work in the same department, Dept. 451. Their wives, Thelma and Barbara, worked for graphic reproduction, Dept. 120-3.

On Jan. 25 W. H. and Barbara Corcoran welcomed a new boy, W. H. Jr. On March 9 E. J. Jr. and Thelma became the parents of a daughter, Pamela Lynn.

E. J. Corcoran Sr. is a buyer in Dept. 211.

Louis Canter Speaks At BMD Conference

Louis Canter, chief librarian at Convair Astronautics, was one of the speakers at a "Technical Information Conference" held at Air Force Ballistic Missile Division headquarters, Inglewood.

The March 18-19-20 meeting drew representatives from all BMD contractors and agencies. Ideas were exchanged on various technical subjects.

Is It News? Call Convairity



HEAR EXPERT—Dr. Warren S. McCulloch, MIT professor, explains reliable design with unreliable components to Convair SD and Astro engineers during series of lectures at West Coast aircraft companies.

'Reliable Design, Unreliable Components' Discussed by MIT Prof. for SD Group

Over 100 Convair San Diego and Astronautics engineers and reliability men heard Dr. Warren S. McCulloch speak on "Reliable Design with Unreliable Components" at Convair SD Plant 1 recently.

Dr. McCulloch, professor of design in the research lab of electronics at MIT, Cambridge, Mass., is delivering a series of lectures to West Coast aircraft compa-

nies. He was brought to Convair under sponsorship of SD educational services department. Reliability working committee, chairmanned by Dr. A. M. Small, directed arrangements.

The audience was made up of Convair SD and Astro men who are especially concerned with the design, application, and use of complex electronics equipment for weapon systems and aircraft.



WINTER'S WORKS—Special tour of operational installations for Atlas ICBM found this group of top military and civilian planners at Warren AFB, Wyo. Third and fourth from left are George Calvert, Astro's Warren AFB manager, and E. A. Reynolds, manager of product support. J. R. Dempsey, Astro manager, is seventh from left. W. W. Withee, assistant chief engineer-test, is wearing light colored coat.

CRA Council Praised For Work In Developing Recreation Area

(Continued from Page 1) who have given unselfishly of their time to CRA.

"It would make me very proud if every Astronautics employee showed the initiative and enthusiasm displayed by you Council members and all the volunteers who have worked in the area," Dempsey said.

Master of ceremonies for the affair was M. V. Wisdom, Astro's manager of industrial relations.

Wisdom told the guests of early planning for a recreational program at Astronautics. He said management visualized one to two years for formulating CRA with a five to seven-year period necessary for development of the area. He said the earliest possible utilization of even part of the area at that time was three to four years.

"We realize now our planning was for ordinary people, not the enthusiastic group we have within our CRA Council," Wisdom said. "You people, in a matter of months, have set this program ahead by years."

In adding that the attitudes and cooperation shown throughout Astronautics are remarkable, Wisdom said:

"I think we see a rosy future in store for us."

Noteworthy were two presentations. Ezra Johnson of Dept. 771 received the first CRA "Man of the Year" award. This honor was voted him by the Council. He received a clock-plaque as a gift. Art Munson, outgoing CRA president, also received a clock-plaque from the Council for his leadership during the organizational period of CRA. Both presentations were made by J. R. Mitchell, chief of employee serv-

ices.

Mitchell added his personal

thanks to all who have aided the CRA effort and in an about-face

was lauded by the Council for his

leadership and direction. Bill

Rector spoke for the Council.

Art King, CRA president, also

spoke briefly.

Machine shop (Dept. 731) continues to set a speedy pace in Astronautics' good housekeeping and safety contest standings. Machine shop has won the last two monthly housekeeping contests and tied for first every month this year in safety standings.

Second in housekeeping for March went to engineering test support, with electronics close behind. Manufacturing control, trainer manufacturing, inspection and test labs also had perfect safety standings for the month.

Esenwein's Topic 'Success Yardstick'

"Yardstick for Success" will be the topic discussed by August C. Esenwein tonight (April 15) at a Lafayette Hotel meeting of the Convair Astronautics Management Club.

Esenwein, Convair's new executive vice president, will be making his first appearance before a local group since assuming his new duties shortly after the first of the year.

Also on the agenda will be the club's annual nomination of officers and an appearance by members of the club-sponsored Junior Achievement firm.

Lee Appointed Budgets Chief

Two key changes in the executive line-up of the Convair Astronautics controllers department have been announced by J. A. Dufresne, controller.

Effective April 27 John B. Morgan, formerly budget administrator, becomes chief of off-site accounting.



On the same date Howard E. Lee transfers to Astro from Fort Worth Division to become chief of budgets.

Under the new arrangement, Morgan will serve as a direct coordinator of control

functions between Dufresne and present and future off-site installations.

Astronautics is also bringing together for the first time its entire budget organization under Lee. Previously, direct budgets have been a part of estimating, while indirect budgets, under Morgan, have been handled separately. All budget efforts will now be under Dept. 194.

Morgan is a native of Washington, D.C., a Certified Public Accountant and a graduate of Notre Dame. For five years he was an assistant professor of accounting at Notre Dame. He served two tours as a Navy officer, coming to Astronautics in 1956. He was first an assistant to Dufresne, then became budget administrator in July, 1958.

Lee is a native of Omaha, a graduate of the State University of Iowa and a former student at Omaha University.

New Gamma Camera Eye Peers Into Steel Parts

On-the-spot inspection of massive parts for the missile launcher program is now being done at Convair SD by means of a "gamma camera" which can "see" through steel 5-in. thick and over.

In the past, it was necessary to transport the huge steel parts to the Los Angeles area where inspection was done by a subcontractor using a million volt X-ray machine.

The portable gamma camera, recently acquired by Convair SD, contains radioactive cobalt (Cobalt-60) as the source of radiation. The cobalt is in the form of a tiny capsule, approximately one-fourth the size of an aspirin tablet, which can be transported easily and used in places inaccessible to other types of non-destructive testing equipment. When not in use, the radioactive capsule is safely stored in an 800-lb. lead housing, known as the camera unit.

The new gamma camera unit, a "Multitron," is used at both Plants 1 and 2 on the missile launcher program by E. J. Yannaccone, trained operator of quality control process lab (Dept. 197-4). Work is under direction of G. R. Bailey, supervisor.

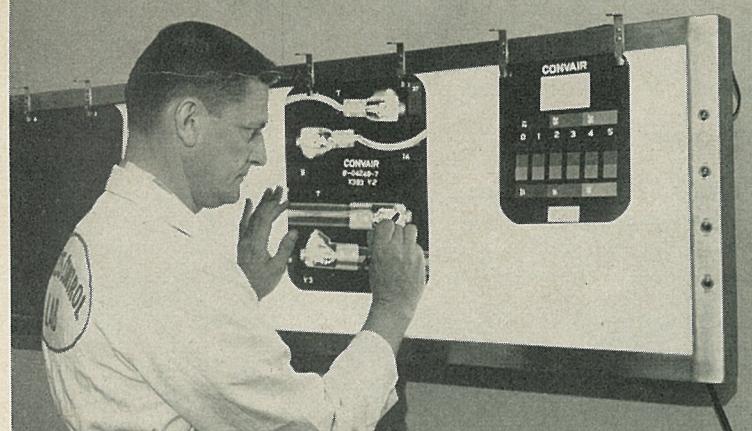
According to Bailey, "This new

type of equipment makes possible inspection of welds in parts too thick to be penetrated by the X-ray equipment available. Advantages of gamma-ray radiography include its ready portability, simplicity of operation, relatively low cost, as well as elimination of all need of maintenance."

Lou Beauchamp, SD industrial hygienist, and Carol Purdy, health radiation physicist, explained that the gamma camera is perfectly safe for the men using it when proper safety precautions are observed.

The small amount of radiation received by the trained operators in all-day use of the cobalt source is far below the permissible amount allowed by the Atomic Energy Commission. Operators wear pocket dosimeters and film badges which are checked often to measure the amount of radiation to which they have been exposed. The operation area is patrolled constantly with gamma survey meters as a check on the radiation level.

"We especially want to remind everyone to observe the safety signs and flashing red lights placed around excluded areas when X-raying is in progress," concluded Bailey.



"SEEING" EYE—In upper shot, E. J. Yannaccone (SD-Dept. 197-4) tapes flexible film around steel part to be photographed by means of gamma ray. "Gamma camera" in foreground contains cobalt source. In lower picture, D. J. Wine inspects negatives on reader in X-ray lab at Convair SD Plant 2.

Martin Transferred Back to San Diego As Rumbaugh Takes Over at Palmdale

William J. Martin, manager of Convair SD's Palmdale facility since 1955, has been promoted to special assistant for the F-102/F-106 programs to B. F. Coggan.

Cal. Daylight Saving Will Start April 26

Convair people living in California will set ahead their clocks one hour the last Sunday of this month (April 26) as the state goes on daylight saving time.

According to California state law daylight saving time starts each year at 2 a.m. the last Sunday in April and ends on the last Sunday in September.

All Convair folk of San Diego, Astronautics, and Pomona Divisions will be reporting to work one hour "earlier" on Monday (April 27).

Convair vice president and SD Division manager.

Before going to Palmdale to head operations there almost four years ago, Martin had been chief production flight pilot at Convair SD.

His successor as Palmdale manager will be W. H. Rumbaugh, chief of field operations at Palmdale since the F-102A program was started there.

Joining Convair in 1940, Rumbaugh has worked in flight maintenance and field operations during most of his time with the company. He had been assistant general foreman, general foreman, assistant superintendent and chief of F-102 field operations in San Diego. He was chief of field operations for the first flight test of the YF-102 at Edwards AFB.

A native of Findley, Ohio, he was associated with Signal Oil Co. in San Bernardino before joining Convair.

CONVAIRITY

Two Friday Holidays Slated For Summer

Convair people at all divisions can look forward to two three-day weekends this summer.

Since both Memorial Day (May 30) and the Fourth of July fall on Saturdays this year, the Fridays preceding will be company holidays. Convair plants at San Diego, Pomona, Fort Worth, Daingerfield, and off-site bases will be closed from Friday (May 29) through Sunday (May 31), and from Friday (July 3) through Sunday (July 5).

CONVAIR MEN ACTIVE AT SAE CONFERENCE

Four Convair men had major roles at the national aeronautic meeting of the Society of Automotive Engineers in New York City March 31-April 3.

R. A. Taylor of Convair SD engineering was secretary of a session on starting and servicing equipment for turbine transports.

M. L. Hicks of Convair FW was a member of a panel on "Make or Buy" problems. J. B. Ottestad of the Convair Dynapak project presented a paper on "Shaping by Plastic Deformation."

D. A. Heald of Convair Astronautics gave a paper on "Some Development Problems with Large Cryogenic Propellant Systems."

Over 2,000 experts in the missile and aircraft fields from all parts of the country attended the meeting.

18 Radio Antennas Link 880 to Ground Stations

All of the 18 antennas equipping the Convair 880 are now through the development part of the program and are in various stages of construction.

Antennas for communications, navigation, and weather radar are located in every part of the plane.

Contrary to popular belief, antennas are no longer wires.

"All antennas must be mounted as flush to the surfaces of the plane as possible," explained Ray Justice, Dept. 6-34 senior electronics group engineer in charge of the microwave, antenna, and radome groups. "The wires which on conventional planes go from the tail cap to the front of the planes have been replaced entirely by flat-mounted antennas."

Antennas on the new jet transport are round, square, oblong, shaped like small boxes or cups or long shields—with the outside openings covered with plastic and wires carrying the energy from the inside to the "box."

For instance, that black

"hump" on the top of the center fuselage is the 96-in. long automatic direction finding (ADF Sense) antenna. The entire tail cap at the top of the vertical stabilizer is a high frequency communication antenna. In the nose radome are located both the weather radar and the glide slope antenna for instrument landing. Others are placed in different parts of the fuselage.

Antenna research and development for the 880 has been going on since the jet transport was on the drawing board, over three years ago. Models of the plane with scale models of the different antennas attached have been checked out on the antenna pattern ranges atop Bldgs. 19, 51, and 4 at Convair SD Plant 1.

The models are rotated on towers, simulating free flight conditions, to test the antennas with energy generated from other locations.

Although antenna research has been in progress at Convair SD for over 10 years, the program has been greatly accelerated during the 880 research and development period.



LISTENING POST—Kirk Abbey and Milton M. Chazotte Jr. of Convair SD engineering check scale model of antenna under test on 880 model during antenna radiation pattern studies on roof of Bldg. 51. Other test equipment in program can be seen in background on roof of Bldg. 19.



COMPLETED—Henry Grawald, left, FW chief of engineering tests, talks with Scott Adams of plant engineering upon completion of Convair Fort Worth's high altitude laboratory. New facility, constructed by Arthur E. Magher Co. of New York, is one of largest facilities of type in U.S.

'Weather Manufacture' Job of New Lab at FW

"We're not just talking about the weather these days at Convair Fort Worth."

"We're doing something about it!" said Henry Grawald, chief

of engineering test, last week upon completion of new high altitude test chambers.

The weather is being controlled in the new laboratory—believed to be the largest of its type in the United States. It went into operation this month.

Composed of three chambers, two of which can be combined into one, the new facility can control temperatures from a minus 100 to a plus 400 degree Fahrenheit.

It is designed to simulate altitudes from sea level to 100,000 feet in a matter of a few minutes and can provide humidity from 20 per cent to 95 per cent at various temperatures.

Unique in design, the size of the test chambers makes it possible for large components or complete aircraft systems to be subjected to environmental testing.

Another flexible feature of the \$2½ million project is that all three chambers can be operated simultaneously and at different conditions.

The auxiliary systems can be used to supply vacuum, refrigeration and high pressure, high temperature air to test setups in the area adjacent to the laboratory.

A large console room resembles NBC's master control at Radio City in New York. Here with the press of a button and the turn of a switch or two, the weather and altitude remain at the engineer's fingertips.

Scott Adams of plant engineering has been project engineer on the facility working closely with the Arthur E. Magher Co. of New York.

Construction got under way in the fall of 1956.

Not limited to tests on the supersonic B-58 Hustler, the new laboratory is equipped to test new versions of even more sophisticated weapon systems.

Grawald said the facility is designed to test the performance of components of high speed, high altitude jet aircraft before they ever leave the ground.

"We've got to take out all the errors we possibly can on the ground. When they get upstairs, the crew can't pull over and look under the hood," he said.

Bunker Hill Visitors Inspect FW Factory

Convair Fort Worth played host to some 30 community civic leaders from the vicinity of Indiana's Bunker Hill Air Force Base recently.

The group, which came to Fort Worth via Barksdale Air Force Base in Louisiana, dropped in at Convair as a part of a Strategic Air Command briefing.



COMMUTER—Convair Fort Worth's J. T. Siler, senior structures engineer, saves gasoline by commuting to and from his home in McKinney, Tex. He gets 25 miles per gallon (at 25 cents per).

Ranch to Plant

Commuter Says It's Cheaper To Come to Work by Airplane

J. T. Siler of Convair Fort Worth's Dept. 6-2 literally flies to work each day and says that he's saving money, too.

Siler, a senior structures engineer, downs his coffee and cereal for breakfast, jumps into his Luscombe 8A plane and makes it to Fort Worth's Meacham Field from his farm in McKinney, Texas, in something like 30 minutes flat. He says it's about 50 air miles.

"There's no hustle and bustle of traffic up there," he said, pointing up to the wild blue yonder. "There aren't any red lights to slow me down either."

After he touches down at Meacham, he drives to work at Annex 2 and makes it in time to have a second cup of coffee before work.

Siler says it's cheaper to drive the plane to work than to use his car. The plane, which is valued at the same price as some of to-

day's low-priced autos, gets 25 miles per gallon.

A veteran of the Air Force, Siler has been flying since 1939 but has had his plane for only three years.

There's a 1,600-foot runway on his 32-acre farm which provides adequate space for taking off and landing.

Convair Folk Aboard West Indies Cruise

Thirty-three Convair Fort Worth people were aboard the MS Italia ocean liner recently on two different Shrine cruises to the West Indies.

Both cruises originated from Galveston on March 14 and 23 respectively and were destined for the British colony of Jamaica.

Among the Convair people aboard were the Jim E. Topliffs, the Kenneth Bellamays, the J. D. Todds, the Ed Tates, the Norman L. Varners, the Ed Wrights, the Hershel Gibbs, Dan and Dorothy Harper, the John A. Efirds, the B. R. Harpers, the Glen Hudsons, the Ronald Southerns, and the Ed Chaney.

Bill Chambers, son of F. E. Chambers, manager of industrial relations and security, was also aboard, as were Otha Coburn, who operates the plant cafeteria, and Mrs. Coburn.

The cruises terminated in Galveston on March 22 and 31.

Cartoonist at FW Wins Second Place

A cartoon titled "Adam and Eve" won a second place in the Fort Worth citywide cartoon contest this month for Convair Fort Worth's Russell J. Byther of Dept. 6-5.

Byther's cartoon shows Adam as a tall, skinny fellow and Eve as a pudgy, double-chinned character.

FW Man Gets Civil War Gun

As his father had done before him, L. W. Brock recently handed over to his son, L. W. Brock Jr. of FW's Dept. 32, a Remington rifle that was used by U.S. troops in the Civil War.

Although a museum piece now, the gun is quite capable of being fired, the younger Brock said.

"However, it's quite a chore to load it."

Powder must be poured into the barrel and tapped down, followed by the shot, which also must be tapped in place. A small cap inserted below the hammer ignites the powder and fires the gun.

"So I'll not use it for hunting," the younger Brock said. "By the time I loaded up, my target would be across the Mason-Dixon line."



REBEL CRY—Convair Fort Worth's L. W. Brock Jr., right, of Dept. 32 let out Rebel yell recently when his father handed over U.S. Army Civil War rifle as gift.

Writing Award Fund Rewards 114 Authors For Articles in '58

Convair writers at all divisions totaled 114 articles published in technical or trade magazines during 1958.

Writers received \$150 an article from the Convair writing award fund in lieu of payment from the magazines accepting the articles. The fund was set up in 1956 to encourage Convair people to submit articles of specific interest within the aircraft industry.

Until the fund had been established, little interest was shown in submitting articles to technical publications, as shown by the 17 published during the year before the program was started. The number increased to a high of 126 articles accepted during 1957.

San Diego Division authors led during last year with a total of 60 published articles. Fort Worth was second with 29; Astronautics, 15; and Pomona, 6. Three articles were accepted from the scientific research laboratory and one from General Offices.

Anyone interested in the program should consult the division public relations office on procedure. All manuscripts must be submitted through Convair.

T-29 Mod. Job Due For Test

First T-29 being modified at Convair SD for Air Force use as an airborne monitoring platform is due for completion within the next two weeks.

It will go into flight testing at SD the first of May before being ferried to Eglin AFB, Fla., next month for further off-site flight tests.

A second T-29, now undergoing similar electronics modification at SD Plant 1, is scheduled for completion this fall.

The two Convair-built planes will go into use at Eglin Gulf Test Range, Fla., during missile tests. The T-29s will be flown over the 400-mi. range before and during tests to check out ground radar and telemetering stations, to monitor frequency interference in the area, and to record data during missile launching and flight tests.

Ground Broken For New Lab

Ground breaking for a new laboratory testing facility at Convair SD Plant 1 started last week.

The new steel frame building (Bldg. 72) will adjoin Bldg. 79, south of the wooden mockup building. Construction is being done by Diversified Builders, Inc., of Los Angeles under supervision of SD plant engineering at approximate cost of \$200,000.

The one-story building, scheduled for late June completion, will house hydraulic primary controls personnel and equipment of engineering's dynamic laboratories. Construction of the new facility is a part of the long-range program which eventually will see replacement of all dynamics lab facilities west of Bldg. 5 with new structures.

Plastics Conference Slated For Dallas

Designers will take a closer look at reinforced plastics from the aircraft and missile industry viewpoints at a one-day Regional Technical Conference to be held in Dallas April 28 at the Adolphus Hotel.

Nick Novelli of Convair Fort Worth's material and processes engineering is program chairman. The conference is sponsored by the North Texas Section of the Society of Plastics Engineers, of which David A. Daniels of FW materials and processes is secretary.

Quirk of Fate

Wartime Germany Experience Leads to Career in Drafting

It took a war to change Clare Hodgins of Astronautics engineering from a fashion designer to a design draftsman.

She developed her drafting skill in what was little more than a slave labor camp in wartime Germany where she was trapped by hostilities during a visit.

A German by birth, Mrs. Hodgins came to the United States with her family when she was 5. She became a citizen with her father. After attending secondary schools she was trained as



MEMORIES—Talents now devoted to helping produce Atlas ICBM at Astronautics were acquired in wartime Germany by Clare Hodgins, above, of Astro engineering.

George AFB F-102s Fly to North Island

A squadron of F-102s from George AFB, Calif., flew to San Diego early this month to join Navy and other AF pilots of the 27th Air Division of NORAD in their first annual fly-in.

Purpose of the fly-in, which saw F-89s of the 437th FIS from Oxnard AFB joining the F-102s from the 329th FIS and the F4Ds of the VF-103 navy squadron, was to discuss teamwork and defensive tactics in their duty with the North American Air Defense Command.

Linda Dobbs Science Scholarship Winner

Linda Dobbs, 18, stepdaughter of William Duerson of the Convair SD mail room at Plant 1, has been awarded a science scholarship to the University of California at Berkeley.

The scholarship provides a year's tuition and expenses at the University. Linda has had a straight A average in her major of mathematics at Lincoln High School where she will be a June graduate.

a fashion designer, while her father built a successful interior decorating service.

In 1939 her family was informed of a family inheritance in Germany. There was just one catch—money from it had to be spent in Germany. So back to Germany the family went, intending to put the daughter through a three-year art course.

Hitler had made things hard for those who had renounced their citizenship. Mrs. Hodgins was denied permission to move from the city of the family holdings to another where the art school was located. However, she was told that perhaps after serving in a labor camp for a year she might be granted a permit.

"I joined the camp with girls my own age, and labor I did," Mrs. Hodgins said. "But the worst part was the attempted brain washing. It didn't take and after a year I was right back where I started. No permit."

In the interim Germany and the United States went to war.

For a time she worked in a medical center. Then came an opportunity to take up drafting. She graduated and was sent to work in a factory turning out gyroscopes and other electronic war goods.

Her associates were slave laborers, Russians, French and Belgians. Supervisors were German. Each received two meals a day. Most were herded to and from work by armed guards and lived in guarded barracks. Because of her German birth, Mrs. Hodgins was allowed to live in a nearby village. She also received "pin money," a small cash amount passed out every two weeks. During the day she was just another slave worker. At night she and her father, also a factory worker, were closely restricted.

Near the end of the war a steady stream of Allied prisoners passed through town. Some fell from exhaustion. Mrs. Hodgins secreted a dozen of these at various points and shared her rations with them.

In March, 1945, the first Allied troops appeared.

"The first American I saw was a chaplain who came to the place I had gathered my GI patients," Mrs. Hodgins recalls. "I was so shaken up I couldn't answer his questions."

The chaplain returned her to headquarters where she was interrogated. One officer impressed her with his kind words. She learned later he was Gen. George Patton.

From March, 1945, until September, 1946, she worked for military units, awaiting permission to return to New York.

In 1949 she moved from New York to California and joined Astronautics about 18 months ago.



FINALISTS—Daughters of two Convair FW families were finalists in Miss Fort Worth contest this month. Primping before going on stage, left to right, Ann Gross and Mary Laura Littlejohn. Ann is daughter of Mel Gross, Dept. 17. Mary Laura is daughter of W. M. Littlejohn, Dept. 46.

NEWS FROM OTHER DYNAMICS DIVISIONS

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair, Ltd., of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., aircraft, missiles, and space systems.

Electric Boat of Groton, Conn., submarines.

Stromberg-Carlson, of Rochester, N.Y., telecommunications, electronic equipment.

Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.

General Atomic of San Diego, Calif., nuclear research, development, production.

Electro Dynamic of Bayonne, N.J., electric motors, generators.



WRITERS—Aviation writers of Houston, Dallas and Fort Worth are shown at Carter Field in Fort Worth just before takeoff in Canadair 540 for press demonstration flight.

Canadair 540 Meeting a Warm Reception Wherever it Goes

"When we're talking to people who have operated Convairs, we don't have to sell them on the quality or performance of the aircraft."

"They've already sold themselves."

That's the reaction reported this week by a Canadair, Limited, team which is showing off the new Canadair 540 turboprop airliner and executive transport.

Ken MacDonald, a transplanted Scotsman who is sales manager for Canadair in Montreal, Canada, told a group of aviation writers at a meeting in Fort Worth April 7 that the new plane is meeting a warm reception everywhere it stops.

The writers, only a few minutes before, had made a one-hour demonstration flight in the plane, flying out of Fort Worth's Amon Carter Field.

All the passengers indicated they were pleased with the plane's rate of climb—they were at 20,000 feet in 15 minutes. They also indicated they were pleased with the quiet performance of the plane's Napier Eland engines. Each of the two power plants revs up to 3,500 hp.

Passengers appeared most impressed, however, with the lack of vibration in flight—even in a fast climb.

Other Canadair members of the sales team making a nationwide sales tour are B. G. Smith, assistant sales manager, and G. Haynes Davies, director of public relations.

The plane earlier had been to New York, Washington, Atlanta and Houston. From Houston, it flew aviation writers to Fort Worth, returned them to Houston that night.

It flew back to Fort Worth on Thursday, April 9, to fly groups of Fort Worth and Dallas business and civic leaders. On Friday, it flew members of Convair Fort Worth's division operating council.

While at Fort Worth, it also flew representatives of airlines and business firms which operate executive transports.

It was due then to fly to Las Vegas to be on hand for opening of the World Congress of Flight, in which a number of Convair planes were also scheduled to participate.

From Las Vegas, the plane is

due to continue its tour with stops in St. Louis, Chicago, Detroit, Minneapolis, Winnipeg, Edmonton, Calgary, Vancouver, Seattle, San Francisco, and Los Angeles. In all, it is visiting 19 North American cities over a route of some 12,600 miles.

The 540 is basically a Convair 440 transport engineered to incorporate the turboprop engines. It is being built in Montreal with the tooling originally used by Convair at San Diego to produce the 440.

Flight crew handling the ship is made up of Bill Longhurst, pilot, Michael Randrup and Ian McTavish.

Commissioning Set For Today

GROTON—A nuclear submarine which enables man to outperform fish will be formally commissioned today (April 15) at the yards of her builder, Electric Boat Division.

Highlight of the commissioning ceremonies will be an address by the Vice Chief of Naval Operations, Adm. James S. Russell, USN.

The Skipjack, which embodies the celebrated blending of the blimp-shaped hull with nuclear propulsion, has shattered all submarine speed records since builder's trials commenced on March 8. The revolutionary 252-foot, 2,830-ton sub's performance has drawn high praise from Navy and Atomic Energy Commission officials since the start of sea trials.

Stromberg-Carlson Names New Secy.

ROCHESTER—Appointment of Edward Diamond as secretary and general counsel of Stromberg-Carlson Division has been announced.

Diamond, who formerly was associate general counsel of the Atomic Energy Commission, assumed his new duties last week. In the position of secretary he will succeed Arthur F. Gibson, who will retire in April after serving with Stromberg-Carlson for 47 years.

CONVAIRITY

BREWTON BECOMES A VICE PRESIDENT

Roy R. Brewton, Convair controller since 1956, has been named a vice president of Convair Division of General Dynamics Corporation, J. V. Naish, president, announced recently.

Brewton has been with Convair General Offices at San Diego, Calif., since 1943 following the merger of Consolidated Aircraft Corporation and Vultee Aircraft, Inc. He had been with the Vultee Aircraft, Inc. plant at Downey, Calif., for over 17 years as assistant treasurer in charge of taxes.

At San Diego he served as executive accountant until his appointment as assistant controller May 16, 1952. A year later he was named director of general accounting, first for Consolidated Vultee and later for Convair after merger of Consolidated Vultee with General Dynamics in 1954. He was assistant controller from August, 1955, until Feb. 13, 1956, when he was named controller.

No. 13 Ticket

Pioneer Canada Private Pilot Recalls Barnstorming Days

Exactly 40 years ago this month Convair SD's Bert A. Shields, Dept. 15-6, received his private flying license, the 13th that Canada had ever issued.

Now he calls upon his long experience in the development of aircraft in contributing to the operations manual for the Convair jet 880.

A youngster when the Wright Brothers flew first in 1903, Shields learned to fly in the Royal Flying Corps where he eventually served as flight instructor, 1917-18.

At the end of World War I, Shields was one of the first in line for a private license. One issued April 8, 1919, proclaimed Shields the 13th person to qualify in Canada for private flying.

Crossing the border later that year, he was issued license No. 543 by the U. S. Navy and Army Cognizance Board.

In the U. S. Shields promptly posted a number of "firsts."

On May 1, 1919, he had his own "airline" in operation. Flying from a potato field, he transported cargo from Banburger's Department Store in Newark, N. J., to Atlantic City—a distance of about 100 miles.

"It was apparent that money was to be made by taking people for airplane rides," Shields recalled.

Fithian to Address Institute Meeting

Jim Fithian, Astronautics electronics engineer, will address a 7:30 p.m. meeting of the Electronics Technical Division, American Institute of Electrical Engineers, set for the Naval Electronics Laboratory.

Fithian will discuss "Solid State Switching Circuitry." All Astro employees and guests are invited. C. L. Hitney, ext. 2324, will supply details.

Job Classification Cheyenne Problem

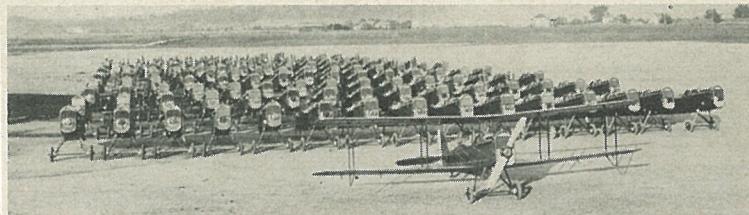
J. N. Mattson, Astronautics industrial relations representative at Warren AFB, Wyo., reports a rather unusual applicant among the first to seek employment with Astro through the new Cheyenne employment office.

A bearded old-timer, complete with Stetson, levis and high heeled boots, shuffled up to the counter and asked for employment as a sheepherder.

"Figure any outfit settin' up business in this country needs a good herdsman," he said.



DAYTON-WRIGHT—This was Dayton-Wright's Plant I at Dayton, Ohio, in June of 1918 at peak employment. Below are fuselages of DH-4s, built by Dayton-Wright.



Post-War Private Plane Market Proves a Bust

(Another installment in history of companies that contributed to ultimate formation of Consolidated Aircraft appears below.)

Early in World War I, Washington decided to purchase fighter aircraft from the Allies and to concentrate domestic manufacture largely on training planes

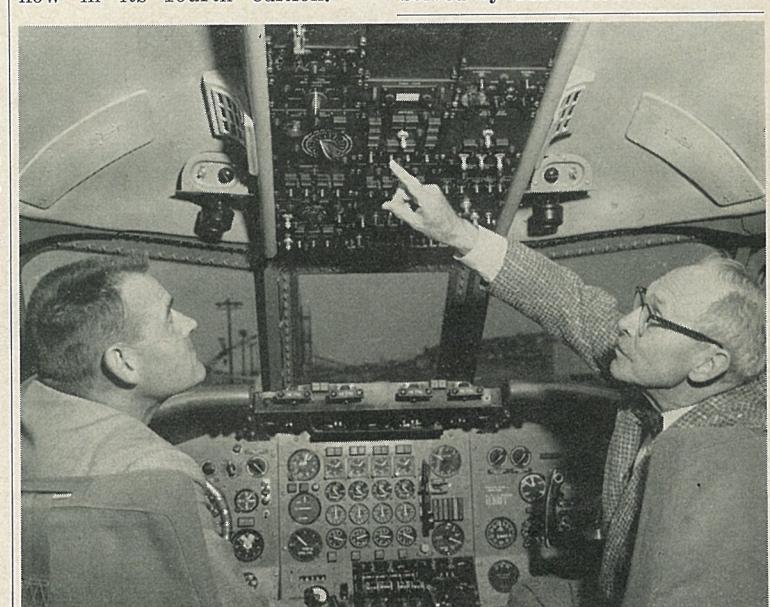
and the British-designed DeHavilland 4, a two-place reconnaissance bomber. The first sample DH-4 arrived from England in July, 1918, and was dispatched to Dayton-Wright at Dayton, Ohio, for study. Modified to accept the new Liberty engine and American machine guns, it was test-flown Oct. 29 by Howard Rinehart.

The Army eventually contracted with Dayton-Wright for 5,000 DH-4s and 400 SJ trainers, giving the company the largest dollar volume of any aircraft manufacturer with which it dealt. At the peak of operations the company employed 8,000 in three plants in the Dayton area.

Like other manufacturers, Dayton-Wright hoped a market for private craft would develop after the war, since the training program had taught thousands of young men to fly. The company brought out two cabin models in 1919 (to outmode what it described as "unsightly flying togs") and displayed a small open-cockpit sports craft, the Messenger. It built a monoplane racer with retractable wheels (for photo see Convairity, March 18) and a float-mounted cabin plane for use in the Canadian woods.

As early as June, 1919, Orville Wright anticipated the lean years ahead when he wrote: "The expense involved in putting the aeroplane business on a sound commercial basis will be such that small, if any, dividends are likely to come from it for some time . . . I therefore send in my resignation, in so far as salary is concerned, without withdrawing from any of my duties as consulting engineer."

General Motors Corp. acquired part of the company's assets and good will in 1919 for \$1,096,000 in debenture stock, thus making Dayton-Wright a subsidiary. The Dayton-Wright Co. (which lost "Airplane" from its title in the 1919 reorganization) was dissolved by GM in 1923.



JENNYS TO JETS—Bert Shields, aviation pioneer (on right), now working on operations manual for 880, and G. P. Williams, assistant supervisor service publications at Convair SD, check out data in 880 cockpit.

Bangsberg Elected Archer President, Buchanan is Veep

Astronautics archers named Willis Bangsberg president in an election last month, reports Al Stone, commissioner.

Others named: Cliff Buchanan, vice president; W. P. Prentiss, secretary-treasurer; Harry Black, field captain; and Warren Osborne, target captain.

At the same time the group announced a tentative program to offer instruction in archery to all ages. Special club dues entitle members to reduced target rates, plus a copy of a local archery publication monthly as well as other benefits. Family rates are \$2.50 per year, individual rates \$2 per year.

Events coming up include a shoot April 12 at the Astro archery range near the Astro plant in conjunction with SD Division bowmen. On April 16 a business meeting will be held at 7:30 p.m. at the San Diego Division CRA Clubhouse, across from Plant 1.

Log Book Entries

Promotions

ASTRONAUTICS

Promotions and transfers to or within supervision effective March 30:

Dept. 183-1, Systems & Procedures: To systems & procedures supervisor, C. V. Gibbs.

Dept. 193-0, Industrial Accounting: To accounting supervisor, I. T. Walsh.

Dept. 220-6, Manufacturing Control: To manufacturing control asst. foreman, P. E. Vandeford.

Dept. 280-2, Inspection: To inspection asst. supervisor Gr. V. H. L. Dillow.

Dept. 321-5, Support Engineering: To customer training asst. supervisor, V. E. Boyer.

Dept. 350-1, Support Base Activation: To activation support supervisor, R. W. Lam.

Dept. 556-3, Servomechanisms Design: To asst. design group engineer, C. C. Roshon.

Dept. 775-0, Trainer Assembly: To asst. foreman Gr. III, R. H. DeWald.

AFMTC

Promotions and transfers to or within supervision effective March 30:

Dept. 571, Convair Operations: To test conductor, T. J. O'Malley. To asst. foreman Gr. V. L. N. Foley Sr., O. J. Meotti Jr. To inspection asst. supervisor, C. J. Hickey, G. R. Metcalf, R. E. Sheltman, R. D. Wintz.

VANDENBERG AFB

Transfer to supervision effective March 30:

Dept. 576-0, Convair Operations: To group engineer, J. V. Stall.

Service Emblems

ASTRONAUTICS

Service emblems due during the period April 1 through April 15:

Fifteen-year: Dept. 772-0, Frances E. Ciprian.

Ten-year: Dept. 342, H. H. Mishler; Dept. 343-0, G. P. Peacock; Dept. 771-0, J. L. Bloomfield, L. P. McHugh, P. F. Pound.

Personals

ASTRONAUTICS

Our heartfelt gratitude to the many personal friends and associates of Milburn C. Copold, throughout Convair, for the warm friendship and expressions of sympathy and understanding as evidenced by the multitude of messages, cards and beautiful floral offerings.

Mrs. Milburn C. Copold

Justine Brooke Copold

Steven David Copold

Births

ASTRONAUTICS

CORCORAN—Daughter, Pamela Lynn, 7 lbs., 8 oz., born March 9 to Mr. and Mrs. E. J. Corcoran Jr., Dept. 451. Mother, Thelma, is former employee of Dept. 120-3.

CORCORAN—Son, William H. Jr., 8 lbs., 8 oz., born Jan. 25 to Mr. and Mrs. W. H. Corcoran Sr., Dept. 451. Mother, Barbara, is former employee of Dept. 120-3.

ENDELMAN—Son, Irwin Robert, 7 lbs., 7 oz., born April 2 to Mr. and Mrs. L. L. Endelman, Dept. 571.

MITCHELL—Daughter, Gerette Kim, 7 lbs., 13 oz., born March 19 to Mr. and Mrs. J. B. Mitchell, Dept. 322-3.

MOODY—Daughter, Victoria Lee, 8 lbs., 10 oz., born March 18 to Mr. and Mrs. J. A. Moody, Dept. 551-3.

RASSEL—Son, Gregory, 9 lbs., 4 oz., born March 20 to Mr. and Mrs. John G. Rassel, Dept. 571.

Lost & Found

ASTRONAUTICS

LOST—Lady's yellow gold Elgin watch Wednesday, April 1, between fourth floor Bldg. 1 and parking lot. Sentimental value. Watch purchased by ex-POW at Freedom Village, Korea. Reward. Contact Sue Quarles, Dept. 195, ext. 1335.

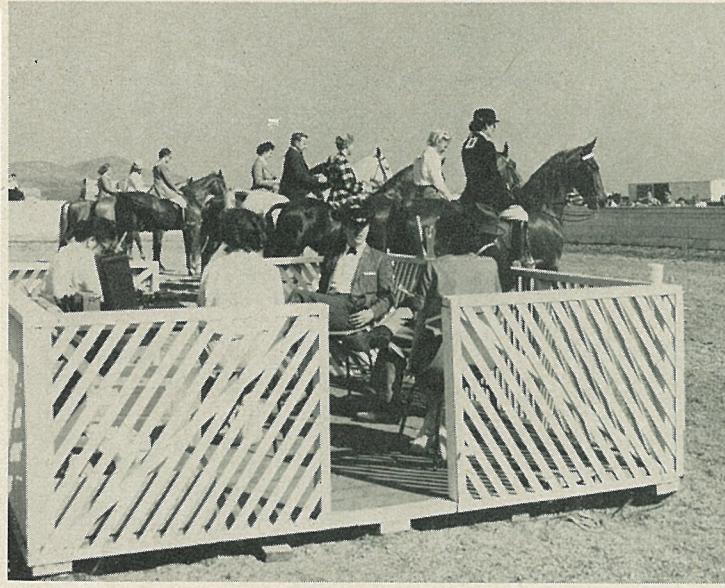
Deaths

ASTRONAUTICS

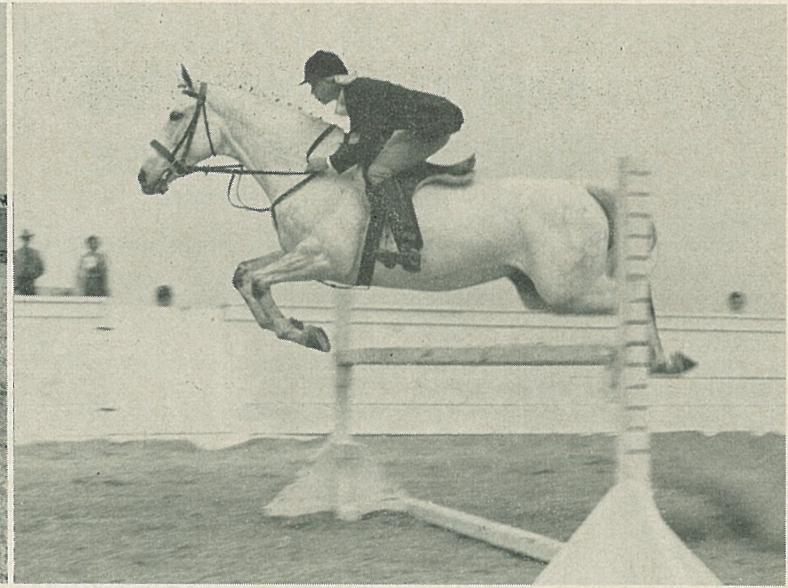
DEDRICK—Harry Edwin, Dept. 211-4. Died April 5. Survived by wife, Dorothy; sons, Richard and Kenneth.

HEMPHILL—Arthur Jewel, Dept. 461. Died April 5. Survived by his wife, Dorothy Mae; three children.

SUMMERS—N. L., Dept. 571-3. Killed in auto accident April 4. Survived by wife, Louise, and four children, Kenneth W., Donald W., Alfreda K. and Walter E. Summers.



POPULAR ATTRACTION—Some 2,000 spectators were on hand during day April 5 to watch Spring Horse Show presented by Astro Riding Club. At left is view of judges' stand with some show workers relaxing as judges do their jobs in ring. At right is



unusually good action shot of rider and mount clearing bar. It was made by Les Blakely of Astrolens. Blakely, Tom Conway and Marshall Jones made photographic records of event for Astrolens and CRA.

15 Sons, Daughters Take Scholar Exam

Fifteen Convair Astronautics sons and daughters reported to the Astro plant April 4 to take part in the second phase of elimination in the first Astronautics Management Club scholarship program.

At the time a special college-type aptitude test was given. Results of this test, as well as personal information on all candidates, will be turned over to a panel of three judges for study. Judges will conduct personal interviews with finalists May 23.

The Management Club will present two \$500 scholarships, one to a boy and another to a girl. In addition, \$100 Savings Bonds will go to runners-up.

Coiners to Watch 'On Target' Movie

Astronautics Coiners will stage a second auction at 7:30 tonight (April 15) in a meeting set for the Astro cafeteria.

A movie, "On Target," will be shown. This is one of the latest Astro-produced movies on the Atlas program. It will give Coiner family members an indication of employees' role in national defense efforts, according to Joe Garside, CRA representative.

Coin collectors are invited to bring their exhibits for display competition and prize presentations, Garside said.

Astro Pistol Club Selects New Team

Five Astro Pistol Club members have been named to a new team for outside competition based on aggregate scores registered through the first quarter of 1958, according to Commissioner Bill Geopfart.

Heading the list is David Reichenbacher (Dept. 130-1). Others named are: Russ Oliver, Dept. 131; Ken Bunker, Dept. 131-1; Ken Houghtby, Dept. 130-1; and Geopfart, Dept. 772.

22 Teams Register For Softball Play

Twenty-two teams are now registered for competition in the Astro shop softball league which is set to start May 25.

Two leagues will be formed. Play will be five nights per week in the new CRA softball park under development in the CRA area adjacent to the Astro plant. Three nights each week will find other Astro teams competing in Linda Vista. Two of these nights will feature double-headers.

Girl Golfers Paced By Florence Givens

Lee Stone (Dept. 130-1), Florence Givens (Dept. 500) and Jane Hillis (Dept. 183-3) placed in that order among a field of 10 Astro lady golfers taking part in a March 28 event at Singing Hills.

Plans now call for a tournament to be held the last Saturday of each month for girl employees. Next event will be April 25. Call Lee Stone, ext. 1898, for information.

Players in Demand For City Leagues

Astronautics is seeking experienced softball players to represent CRA in forthcoming city leagues at San Diego, according to Commissioner John Sentovic.

Any players capable of making "A," "AA," or "AAA" ball clubs are asked to contact Ray Mendoza, ext. 1111, or Sentovic, ext. 1010.

Players being sought are for outside competition, not shop league play.

Convair Golf Club To Elect Officers

Convair Golf Club will elect a new slate of officers at a meeting at 7:30 p.m., April 24, in Room 1 of the Conference Bldg., Balboa Park.

All members are urged to take part in the election. Refreshments will be served and door prizes given away.

Entries open today for the club's annual match play championships June 7, 14, 20-21, at Flying Hills, Torrey Pines and Rancho. Established handicaps will be required. Phone entries to Alma, ext. 218, Plant 2; or H. V. Purnell, ext. 1313, Astro.

Deadline for entries is May 22.

Dept. 773 Will Hold Family Picnic Soon

Dept. 773 (missile checkout) at San Diego is planning a family picnic for the Flynn Springs picnic grounds beginning at 11 a.m. Sunday (April 19).

Activities will include various athletic events, games for kids and family fun, according to Ed Russell, general chairman for arrangements.

This is the first event in a planned annual outing, Russell said.

Astro's Wives Club Will Hold Luncheon

Astronautics Wives Club members will stage a luncheon April 29 in the Louisiana Room, Lafayette Hotel. Social hour begins at 11, lunch at 12:30 p.m.

Cost will be \$1.75 per person and includes a chance on door prizes to be presented. Call Dixie Husted, CY-5-0593, before April 27 for reservations.

FLORAL ARRANGEMENTS TO MARK LUNCHEON

Astronautics Wives Club will witness a special presentation on "floral arrangements" at their 7:30 p.m. meeting set for April 22 in the Astro cafeteria. Floral arrangements shown will be given as door prizes. Rusty Walker at BR-3-1025 will supply other details.

Wives Club Members Hear Astro Chorus

The Astro-Notes, CRA mixed chorus, presented a 25-minute program March 25 at a meeting of the Astronautics Wives Club.

Regular rehearsals are held at 7:30 p.m. each Monday in the Astro cafeteria. Winnie Rae Ziegler, ext. 1731 or 1733, will supply details.

2,000 Watch Horse Show

An estimated 2,000 spectators were on hand April 5 to witness part or all of the Astro Riding Club's Spring Horse Show held in the new CRA recreational area near the Astro plant.

Approximately 240 entries performed throughout the day. They ranged from youngsters through seasoned adult riders. Some of the top riders and mounts in the Southern California area took part.

Temporary bleachers, added at the last minute when regular bleachers were not completed, failed to hold the overflow crowd. Some stood about the area, others took up vantage points atop cars and trucks.

Aside from the youngsters who performed like veterans throughout the morning, the real crowd pleasers were the hunters who navigated a tricky jump course within the arena.

Colorful ribbons and trophies featuring a replica of the Atlas missile were presented to top contestants in each of the 20 classes.

'Pebblepups' Attend Lecture on Opals

Astro Rockhounds and "Pebblepups," (youngsters with an interest in rock and gem collecting) turned out 25 strong April 2 to hear a special talk on opals.

Mrs. "Pinky" Krause, owner and operator of a local hobby shop, lectured on grinding and polishing opals and gave some hints as to the best types of rough stones.

Next regular meeting is May 7 at the Astro cafeteria. A field trip is being planned for Calico in late May.

'Quail Walk' Proves Tough For Shooters

A "quail walk" event staged by the Astro Gun Club in conjunction with the San Diego Gun Club April 5 proved to be one of the most baffling of the year, resulting in low scores for most contestants.

Astro men taking home merchandise awards were Robert Petro, Charles Kessinger and Fred Lort. Kessinger, Petro and Ed Larralde also won quail callers, given to winners on each squad.

Ezra Johnson, Astro Gun Club commissioner, was also on the winners' list but declined a prize.

Pete Grijalva Now Keglers' President

Astro bowlers came in for recognition at the annual election of officers by the San Diego Bowlers Association early this month.

Named to the post of president was Peter Grijalva of Dept. 215. Larry Buckmaster (Dept. 342-2) was named executive director, while Ed Lou (Dept. 545-3) and Lee Snider (Dept. 756) were appointed alternate directors.

AFMTC Golfers Plan Rockledge Sweeps

Rockledge Country Club will be "invaded" by Convair Astronautics golfers stationed at the Air Force Missile Test Center in Florida on April 25 and 26, according to Jack Nichols, golf commissioner.

It will be the regular April sweepstakes for the Astro par chasers.

The March event, held at the Titusville Country Club, was won by Ray Knight with a net 54. The tournament was a "best nine" affair.

Second went to John Rostosky, while Tom O'Malley took third and Al Jones, fourth.

Some 60 golfers participated.

Housekeeping Noted Within I.R. Dept.

An inter-departmental housekeeping check within the Astronautics industrial relations department last month produced an "achievement" award (medical section) and an "eight-ball" award (security section).

Industrial relations plans to have the checks made monthly in the future. All factory departments at Astro are included in a monthly housekeeping contest.

Good housekeeping checks are also made of all master group functions monthly. Results of these checks are noted on a chart and reviewed at divisional staff meetings.

Tickets Available To 'Sleeping Beauty'

Astronautics families taking part in the "family night" showing of "Sleeping Beauty" April 30 at the Capri Theater will have two chances to profit.

First, tickets now available through employee services, are only \$1 each, a saving of about half. Second, the sponsoring CRA women's activities plan to hold a special drawing after the 6 and 8:30 p.m. performances at which coupon books for Disneyland will be given away.

Discounts Offered For Padre Game

Tickets authorizing discounts for the April 29 Padre home game are available without charge through Astronautics CRA, Bldg. 8.

April 23 Golf Entry Deadline

April 23 is the deadline for entering the 17th annual Industrial Golf Tournament slated for the first two weekends in May, Art King, Astro golf commissioner, reminds.

May 2 rounds will be shot at Balboa Park. Rounds on May 3, 9 and 10 will be held at Torrey Pines. Entry fee is \$3.50. However, Astro CRA will underwrite \$2 of this amount for the first 75 Astro golfers who sign up.

The match play event will feature flights of 16 players each. There will be one prize for every four entries. Quarter-finalists receive \$5 merchandise orders, while the winner and runner-up in each flight will receive trophies and will be guests, with their wives, at an awards dinner May 10 at El Morocco.

Astro golfers may contact any of the following for entry blanks: Bldg. 1, Art King, ext. 1748; Bldg. 3, Morrie Baxter, ext. 1079; Bldg. 4, John Sentovic, ext. 1010; Bldg. 5, Juanita Littell, ext. 1158; and Bldg. 8, Ray Mendoza, ext. 1111.

Weekend Water Skiing Slated

Water ski activities at Convair Astronautics return to the lime-light this weekend (April 18-19) with skiing at Gleason Point from 9:30 a.m. until 3:30 p.m.

Astro employees interested may sign up for the coming season by reporting to the beach during these hours or by attending a business meeting set for 7:30 p.m. April 20 in the Astro cafeteria.

At the business meeting many plans for the forthcoming season will be discussed, including a possible trek to Salton Sea, if interest warrants.

Astrolens Members To See Travelogue

Astrolens will view a travelogue on Guatemala April 27 when they gather for a 7:30 p.m. meeting at the Astro cafeteria.

Ken Rinker, Astrolens commissioner, said members may also show pictures and slides taken during recent club activities following the movie.

ASTRO CAGE TEAM WINS LOMPOC TITLE

Astronautics turned up with a potent cage team among its employees at Vandenberg Air Force Base this year.

The Astro five, called the "Rockets," swept through the Lompoc City league with only one loss for the year. In a play-off with the U. S. Army Disciplinary Barracks, the Rockets grabbed a 63-52 victory and the league championship.

Ralph Mocker, high scoring Rocket forward, also won the high scoring award for the year.

Team members included Mocker, player-coach Don DeLauer, Jim Davis, Barney Highs, George McGovern, Jim Huntoon and Bob Mills.



HELPING OTHERS—Scenes above are repeated almost every weekend when Astro employees turn out to assist in development of new CRA recreation area adjacent to plant at SD. Many departments have undertaken entire areas for development. Indi-

vidual employees or small groups tackle smaller chores. There is no age limit, since youngsters can often prove valuable assistants in all jobs. Astrolens photographers Ken Rinker and Andre Malabanan were on hand one Sunday to record scenes above.



CROWNED CAGERS—Development team shown above came through to win Astronautics plant basketball championship last month. Team members shown are Ron Johnson, Max Russell, Bill Oman, Bill Rector, John O'Husky, Cecil Crews, Fred Boynton, Jules Hertz and Tom Stoops.

Astro Tennis Team Tops General Atomic, Ties Pomona

Astronautics tennis legions thumped General Atomic 5-2, then broke even with Convair Pomona, 9-9, in a series of matches.

The General Atomic event was held March 21 at Morley Field. Astronautics winners included Larry Chambers over Bob Zietlen, 7-5, 6-1; Jim Iverson over Tom Regford, 9-7, 8-6; Roy Papich over Martin Stearns, 6-4, 6-3; and Carl Shuler over Victor Van Lindt, 2-6, 6-4, 6-3; all in singles.

Astro's doubles entry of Iverson and Papich won a 6-4, 7-5 victory over General Atomic's Regford-Zietlen entry. Astro's Ed Bennett lost to Frank Veehan, 6-3, 6-4, while Bennett and Shuler dropped a doubles contest, 6-2, 6-4, to Stearns and Veehan.

The April 4 home and home match against Convair Pomona was also held at Morley Field. In men's singles, Astro's winners included: Gary Russell over Chuck Smiley, 6-1, 7-5; Art Tilden over Dennis Mann, 6-3, 0-6, 6-4; Jack Bowers over Walter Bradley, 4-6, 9-7, 6-3; Ed Bennett over Stuart Manville, 6-2, 6-0; and Carl Shuler over Grant Taunta, 1-6, 6-2, 6-1.

Ingrid Papich of Astro downed Esther Lafave, 6-2, 2-6, 6-2, in women's singles competition. Russell and Ruth Bennett of Astro topped Gerry Mann and Mrs. Lafave of Pomona by 6-3, 3-6, 6-3, in the mixed doubles.

Astro doubles winners included: Russell and Norman Dyrhrenfurth over Smiley and Chuck Anderson, 10-8, 6-2; Jim Iverson and Roy Papich over Paul Froeberg and Gerry Lafave, 3-6, 6-3, 11-9.

LEAGUE FORMING

A special Monday morning bowling league for Astronautics wives is now being formed. Plans call for action to start April 20. Barbara Mahaffey at BR-7-5094 or Luverne Vlachos at BR-3-0731 will provide information.

CRA Sports & Recreation Convairiety

Record 400 Volunteers Heave Ho in CRA Area

The largest turnout of volunteer workers to date was on hand April 5 to lend a hand in the development of the new CRA recreational area adjacent to the Astronautics plant.

And the 400 volunteers worked!

Largest in number was the Sycamore Canyon group. These men, women and children turned a rock-laden field into a smooth surfaced park, ready for final development of a softball diamond. At the same time, two dugouts were completed.

Tooling employees wound up preliminary work necessary for pouring a concrete slab, the base of a new picnic shelter.

Manufacturing control and inspection personnel installed six small barbecue pits and paved the way for the covering of the shuffleboard courts.

Standards lab of engineering finished the group-sized barbecue pit.

Dept. 756 raked an entire area and spread top soil in readying another section for grass planting.

Dept. 758 completed wiring the south wing of the CRA Clubhouse, while Dept. 771 accomplished many tasks in the north wing.

Dept. 325 started two barbecue pits.

"The jobs accomplished in just

one day show what can be done when employees turn out to help," said Ezra Johnson, chairman of CRA's area development committee. "A few more days like this and we are sure to meet our goal of using most of the area this summer."

Work parties are formed in the area every Saturday and Sunday.

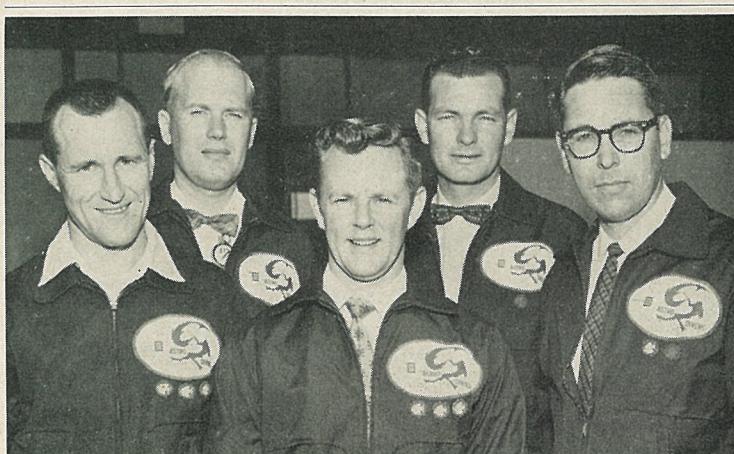
RADIO CLUB NAMES SETS OF OFFICERS

Dual officers, one set for first shift, another for the second, were elected last month by members of the Astronautics Radio Club, according to Commissioner Ed Dodero.

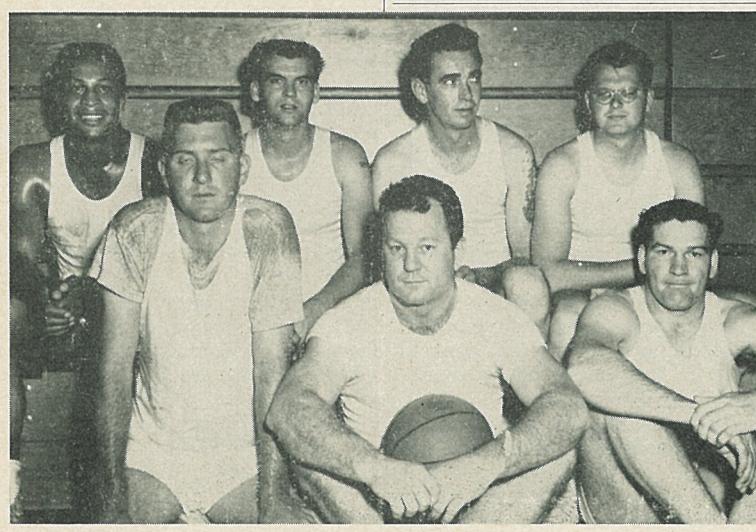
New first shift officers are: president, Bob Clark, W6JTU; vice president, Leonard Owings, W6PYS; secretary, Bonnie Chandler, W6WXI; and treasurer, Ken Minegar, W6RAW.

Second shift leaders are: Russ Oexner, K6TLS, president; Hal Thompson, K6ZPC, vice president; M. Reynante, K6LOP, secretary; and Ben Jodrell, K6GPU, treasurer.

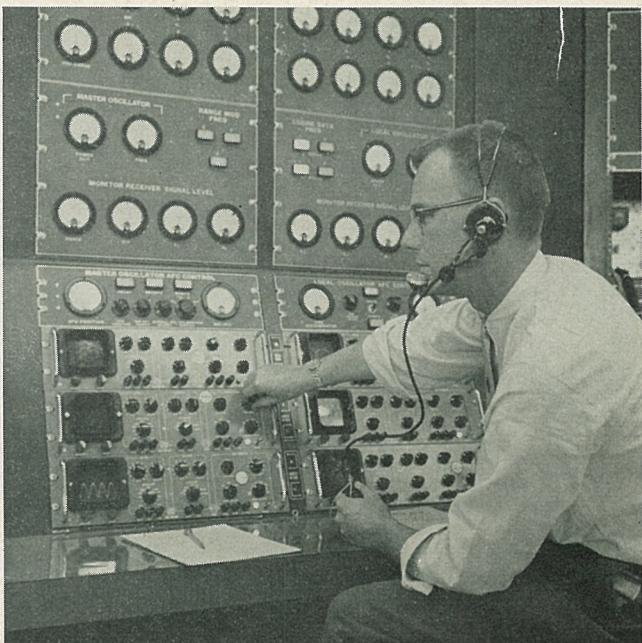
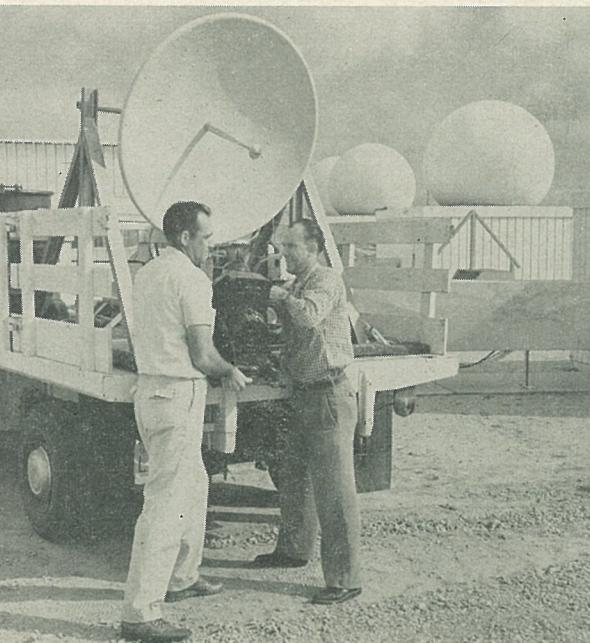
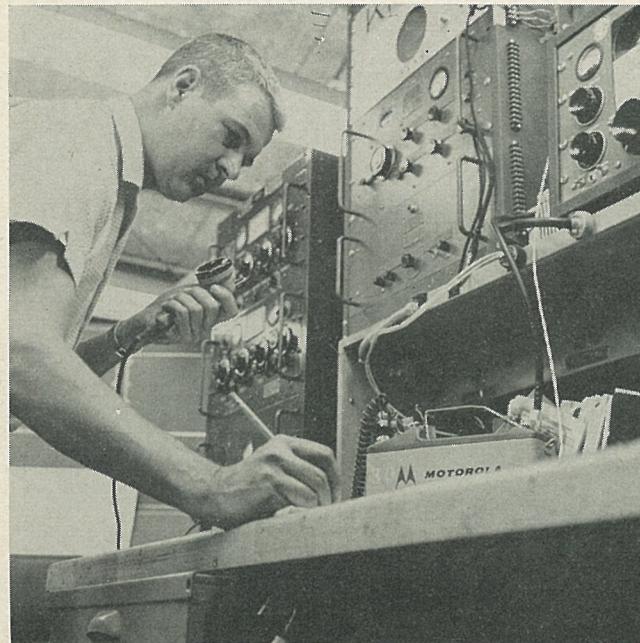
Radio Club members gather at 7:30 p.m. tomorrow (April 16) at the Astro cafeteria. Night shifters meet at 1:15 a.m. April 17 in the mockup room, Col. K-1, Bldg. 5.



TOPSIDE HERE—New officers of Astro divers show off their new jackets and patches following their election last month. That's CRA Commissioner Herb Boynton in the center with Larry Beaver, Wes Kander, Pete Nelson and Herm Reichert gathered about.



LOMPOC'S BEST—This cage team, representing Convair Astronautics in the Lompoc City League, walked off with city championship recently. Players, all members of Astro forces at Vandenberg AFB, are: Ralph Mocker, Don DeLauer, Jim Davis, Barney Highs, George McGovern, Jim Huntoon and Bob Mills.



AZUSA MARK II—A pick-up truck driven through San Diego back country plays part of "missile" in testing improved tracking system developed by Astronautics. Center, L. C. Cusick and R. C. Hansen put aboard power unit. In background under

plastic domes are some of antennas by which ground station keeps in touch. At left E. S. Carson operates radio link with truck, as well as small plane also used in tracking tests. At right is A. E. Hunt and control panel.

Engineers Hard Working, Less Creative in Soviet

The Soviet engineer works a 44-hour week at his regular job, puts in a lot of night work teaching or writing to supplement his salary, works constantly under great pressure and often dies in his 40s as a result.

These observations were among many made before members of the San Diego Section of the Society of Automotive Engineers recently by Secor D. Browne, assistant professor at M.I.T., recently returned from a trip to Russia.

"On the whole, Soviet engineers are less creative than their U. S. counterparts . . . and it is doubtful if the quality of their work is as good," Browne said. "Contrary to some current impressions in this country, the Soviet engineer is not '22 feet tall.'"

Browne, who speaks fluent Russian, last October arranged the exchange of technical and scientific literature between M.I.T. and the Russian Academy of Sciences, and during his trip visited libraries, universities and technical institutes in the USSR.

"The Soviet engineer works under terrific pressure," Browne asserted. "He goes either up or down, there is no in-between. A great percentage, unable to stand the tension, die in their late 40s, many from heart attacks and nervous disorders.

"The tension is applied as early as the elementary school. This is where the weeding out process takes place, based on the brightness of the student, the social position of his parents, and favorable standing in the eyes of the Communist party.

"The youth fortunate enough to attend the university (about one in ten) starts at age 17 and is graduated five years later," Browne said.

"The engineering graduate does not go to work in a factory," Browne said. "He usually joins the staff of institutes or academies run by the State. Design work is handled by the institutes; research and development is ac-

complished by the Academy of Sciences."

Many continue study for higher degrees. One, equivalent to our "master's" is attained somewhere around age 32, Browne said. Few doctorates are awarded, hardly ever before age 40.

"On the job, the engineer works 9 a.m.-6 p.m. week days, 9 a.m.-2 p.m. Saturdays. The majority must supplement their income, which they do by working nights—either on technical papers for publication or by teaching in universities.

"The starting monthly salary is 800 rubles (not quite enough to purchase a cheap suit). With a master's degree the salary increases an additional 500 rubles."

Browne said it is important to remember that income from papers published or from teaching can never surpass 50 per cent of the base pay. He said this spurs the engineer on to greater study in an attempt to get higher degrees, thus increasing his pay on both scales.

"Social life is almost non-existent. Because of limited acquaintances, chemical engineers marry chemical engineers, thermodynamicists marry thermodynamicists, etc., establishing a pattern that is rarely broken.

"This doubles the family income, naturally, but even then families are still crammed . . . sometimes as many as four families to an apartment.

"Because of the tendency to over-specialize, technical literature and information outside the engineer's specialty is not usually available to him. This cuts off an important source that could spark creative ideas.

"The majority of engineers are not party members, but this as a statistic is misleading," Browne said. "Before one can become a party member, years of study and toil, equivalent almost to that put in by an engineer in his field, must be accomplished. It is extremely difficult to get a 'degree' in both fields simultaneously," he said.

Azusa Mark II System Proved Out At San Diego by Truck and Plane

Convair Astronautics engineers and technicians have gathered together an unusual assortment of test "tools" for putting an advanced electronic system through its paces.

Included are two-way "walkie-talkie" radio units, a special mobile unit and an airborne system carried aloft via a single-engine aircraft.

The system under test is the Azusa Mark II.

Azusa Mark II is a highly refined and greatly improved version of the original Convair-developed system (Azusa Mark I) which has been used successfully with almost every ballistic missile launched from the Air Force Missile Test Center in Florida.

The Mark II is slated for in-

stallation at AFMTC this year.

Basically, the operating theory on both systems is the same. However, additions made in the Mark II enable it to produce more accurate data over greater range. Azusa consists of a network of antennas and ground based electronic equipment which "communicates" with an airborne transponder (receiver-transmitter) within the missile to give extremely accurate position and velocity data.

This information, fed into an IBM-709 computer and monitored by a plotting board, gives continuous predictions as to where the missile would impact, if power were shut off.

To date, such predictions have, on occasion, been so ac-

curate aircraft have been able to position themselves down range to actually see a missile plunge into the ocean. In fact, the vast majority of missiles recovered after firings have been equipped with the Azusa system.

"Although now essentially operational, our Mark I system began as an experimental one," said L. G. Chase, electronics group engineer responsible for ground station development. "The Mark II has been developed as an operational system."

Three years ago Convair contracted with the Air Force to design and build the Mark II. While initial planning called for installation of the system at AFMTC, later directions specified Astronautics was to build, assemble and test the complete system at San Diego. Assembly began about the same time Astro moved into its new plant.

Mark II is installed near the southeast corner of the Astro reservation. The 10 antennas are positioned into two lines in the shape of a small cross.

"We are constantly expanding the Azusa application and might eventually involve it in most ballistic missile and space programs," said Lewis Emmerich of the Azusa project office.

Don Prim is the Azusa group engineer for development. Fabrication of many parts as well as assembly of the system fell to Dept. 756 with M. G. Williams as the immediate supervisor.

Testing has progressed with installation. To make exacting checks on the system's accuracy, a special mobile test unit has been devised. It consists of a transponder, antenna and special power plant which are hauled into the San Diego back country via pick-up truck. There it exchanges signals with the ground station.

"We can detect changes in target location with extreme accuracy," Prim said. "And from many miles away we can even detect small antenna movement caused by wind velocity and other factors."

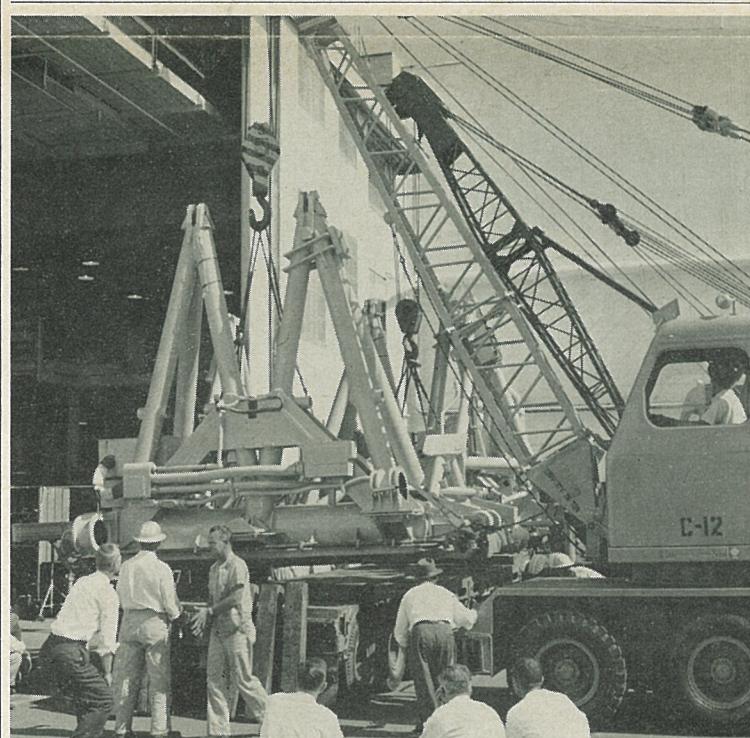
Control and communication to the remote station is through two-way radio equipment, with the truck carrying a unit of the "walkie-talkie" class.

A recent addition to the test program is a Cessna 182 aircraft, flown for Astro on contract by a local firm. Installed in the aircraft is a transponder similar to those placed aboard missiles.

This plane, transmitting signals as it goes, is flown to distant points to allow tracking by the ground station.

Work is now under way at AFMTC on the Mark II final installation site. Astro's plant engineering department is monitoring this work.

Once the AFMTC site is complete and testing finished at San Diego, the Mark II will be crated and shipped to Florida.



OFF TO VANDENBERG—Second missile launcher for Atlas ICBM built at Convair SD for Astronautics Division is swung onto low bed truck in preparation for trip to Vandenberg AFB. It was assembled there by Astro crew.

SD Division Building Launchers As Assist For Atlas Program

Convair SD Division is giving an assist to Astronautics Division under a contract to construct missile launchers for the Atlas ICBM.

First three units of the contract are being built in the Plant 1 experimental factory. Remaining number of the hold-down type launchers will be constructed at Plant 2.

First two of the 40-ton steel launchers were shipped last month by truck from SD Plant 1 to Vandenberg AFB where they were assembled by an Astronautics crew.

As a follow-on order SD Division also will build additional units and a static test article which will be tested this summer at the Point Loma test site.

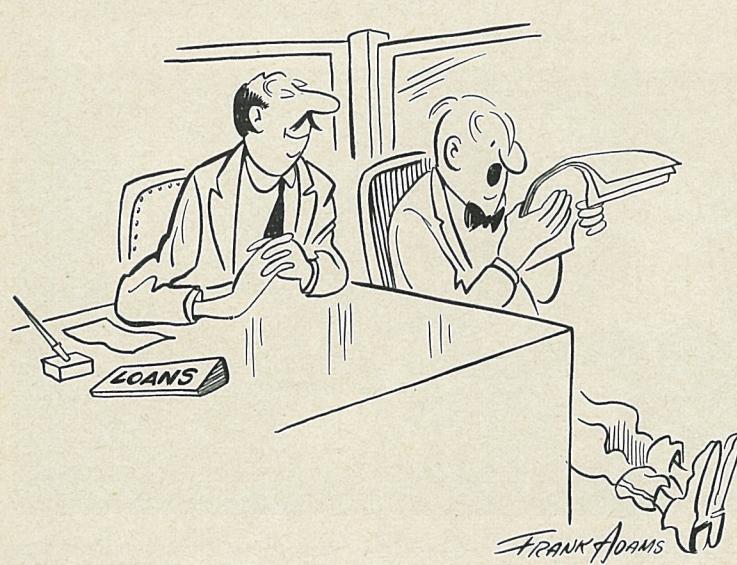
The program task calls for design by Convair SD engineering

and fabrication and tooling in Plant 2 departments under W. P. Woods, chief tool engineer at Plant 2.

A new department (Dept. 269) has been formed for missile launcher final assembly under L. F. Boring, general foreman. Boring will continue to be in charge of Model 8 final assembly. In the organization of the new department, S. S. Stearns has been assigned as foreman.

When assembly gets underway, probably by the first part of June, said Boring, there will be between 50 and 60 working in the department. Final assembly will be done in the C-D bay at the south end of Plant 2's Bldg. 3.

Fabrication and tooling work is now in progress in the northwest section of Bldg. 2 under already existing departments.



"By th' time I get all this small print read, it'll be payday and I won't NEED the loan!"



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

Convairity

Vol. 12, No. 9

Wednesday, April 29, 1959

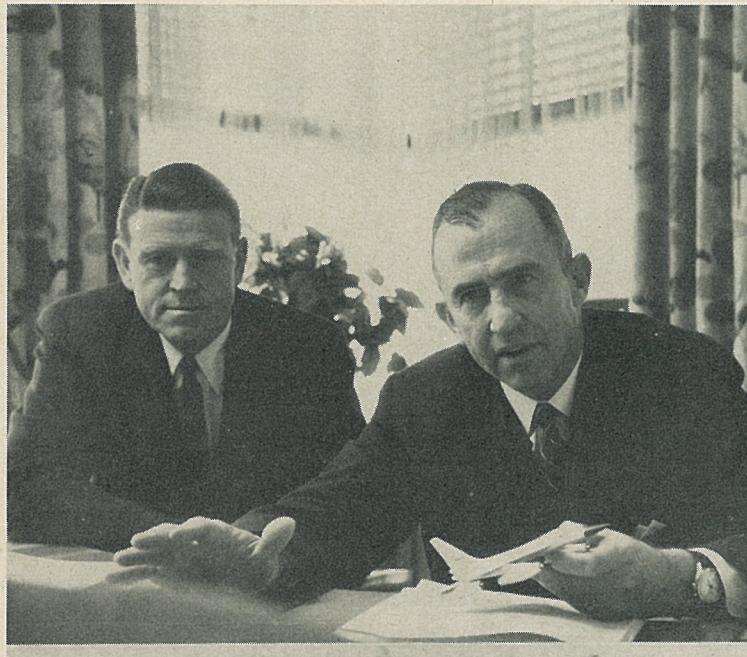
SAN DIEGO, POMONA, ANTELOPE VALLEY, VANDENBERG AFB, CALIF.

Astronautics
EDITION

Serving Astronautics' San Diego plant and facilities at AFMTC, Fla., and Vandenberg AFB, Calif.

Astro news office, Kearny Mesa plant, ext. 1154. Vandenberg news contact, ext. 8-4148. AFMTC news contact, ext. 3038.

AFMTC, CAPE CANAVERAL, FLA., FORT WORTH, TEX.



PROMOTED—Pictured at General Dynamics Corporation headquarters in New York City are Frank Pace Jr., right, new chairman of the board, and Earl D. Johnson, now General Dynamics president. Pace remains corporation's chief executive officer. Election was announced late last week.

Pace Elected Chairman Of Board and Johnson Moves up to Presidency

Frank Pace Jr., president of General Dynamics Corporation, since May 1, 1957, late last week was elected chairman of the board of directors at the board's monthly meeting in New York City.

At the same time, directors named Earl D. Johnson, executive vice president, to succeed to the post of president.

Pace, who remains chief executive officer for the corporation, joined General Dynamics in May of 1953 as a director and executive vice president after a long career in public service. He succeeded the late John Jay Hopkins in the presidency.

Johnson came to General Dynamics as a director and senior vice president-operations and fis-

cal affairs in February, 1955, directly from the presidency of the Air Transport Association. He was named executive vice president May 1, 1957.

Also promoted by the board were:

Carleton Shugg, general manager of Electric Boat Division and a senior vice president of General Dynamics, becomes president of Electric Boat.

Dr. Frederic de Hoffman, general manager of General Atomic Division and a vice president of the corporation, becomes president of General Atomic and a senior vice president.

C. Rhoades MacBride, vice president-operations for the corporation, becomes senior vice president-operations.

Hospital Bed Need Is Acute, Biron Asserts

Hospital beds in the San Diego area last year were 700 below the number considered by the U. S. Public Health Service as an absolute minimum (three beds per thousand population).

"And the shortage will continue to increase by about 100 a year as long as San Diego's population continues to boom," R. H. Biron, Convair vice president-administration, said this week, adding his weight to the Tri-Hospital Building Fund drive for which an in-plant campaign will be conducted at San Diego and Astronautics Divisions this summer, as well as in virtually all other San Diego industrial concerns.

"This is truly a dangerous community condition and affects every one of us," Biron continued. "The raising of funds to increase the bed capacity of Mercy, Scripps and Sharp hospitals by some 400 beds, therefore, becomes a personal problem."

Biron heads the industrial division of the building drive. J. V. Naish, Convair president, is a member of the drive's executive committee.

Even this will not completely cure the situation, however, for Biron added that a Hospital Council of San Diego survey indicates that despite all expansion plans for the next 10 years there will be a shortage of 400 acute-care beds in the county!

Here is what the three hospitals propose to do with the \$10½ million which the drive aims at raising:

1. Mercy Hospital—100 additional beds; new maternity department; new children's department; diagnostic and treatment center for low-income groups; modernization of present facilities.

2. Scripps Memorial—Construction of a new structure which will add 125 beds and will include accommodations for maternity and pediatric patients. Also to be added will be special laboratories and other hospital facilities.

3. Sharp Memorial—Construction of 217 beds including a maternity wing with a 60-bed unit with net increase of 13 beds and net increase of 63 bassinets, remodeling for 22 beds and 3 nurseries, an acute bed wing of 132 beds and a chronic disease wing of 50 beds.

Moves Continue On Schedule

Major rearrangement and relocation programs at Convair Astronautics continue essentially on schedule this week with something like 250 employees being involved during recent weeks.

The programs are slated to continue throughout the remainder of 1959.

Astro is adding a two-story office structure (Bldg. 26), extending the factory mezzanine and erecting a new tooling building (Bldg. 27). Work is underway on all. When completed, they will add considerable space to present facilities. However, to prepare for utilization of these areas, it is necessary to rehabilitate many present facilities for future occupants. Thus, employees and equipment are being moved about as this work continues.

Considerable rearrangement and relocation is in progress in the factory (Bldg. 5).

At the same time much shuf-

(Continued on Page 2)

Esenwein Address Before Club Rates Standing Ovation

A firm belief that Convair Astronautics "measures" high on a "Yardstick of Success" was voiced this month by Convair's new executive vice president, August C. Esenwein.

Esenwein expressed his feelings in a speech on the subject before the April 15 meeting of the Convair Astronautics Management Club. His warm, sincere talk, delivered in simple terms without fanfare, brought a standing ovation from the 425 men gathered at the Lafayette Hotel.

This was Esenwein's first address before a local group since assuming his new duties early this year.

Esenwein expressed a keen personal interest in Astronautics management and the thousands of individual employees it represents. He asked that he be considered a working member of the Astro "team" rather than just "Dempsey's boss."

Speaking of success and the methods of measuring it, Esenwein made it clear that no guaranteed formulas exist. He said consistent solutions to every day problems are more important than occasional successful handling of larger problems.

"It is obvious you men have been highly successful in the difficult job of bringing new hardware (the Atlas ICBM) into being," Esenwein said. "This warrants a great deal of respect to all Astronautics employees."

In applying his yardstick of

(Continued on Page 2)

Three Running For Management Club Presidency

The political "pot" was set to boiling this month by the Convair Astronautics Management Club as time for the annual election rolled around.

Heading the list of candidates are presidential aspirants J. F. Baebler (Dept. 280); R. S. Campbell (Dept. 532); and I. B. Jenkins (Dept. 343).

The club's nominating committee, headed by W. L. Van Horn, recommended a total of 26 candidates. There were no nominations from the floor at the April 15 meeting.

Jenkins, presently first vice president, explained at the meeting that present officers and board members had voted against political "parties" and fanfare that sometimes accompany club elections. Instead, Jenkins said each candidate would stand on his own merits and handle personally all campaigning. Jenkins presided in the absence of President E. T. Clare.

Candidates for the job of first vice president are W. V. Gillette (Dept. 325), M. J. Torres (Dept. 772) and D. P. Wright (Dept. 521). Running for second vice president are H. C. Courington (Dept. 327), D. F. Folland (Dept. 551) and R. W. Keehn (Dept. 773).

There are two secretarial posts to fill. For recording secretary the candidates are J. L. Stephens (Dept. 131), Ernie Wade (Dept. 556) and M. D. Williams (Dept. 322). A. Amison (Dept. 220), J. J. Janda (Dept. 191) and G. S. Oliver (Dept. 539) will run for financial secretary.

E. J. Derbes (Dept. 193), J. A. Lasater (Dept. 521) and L. I. Medlock (Dept. 342) will run for treasurer.

Nine will seek posts as one-year board of control members. They are R. Clever (Dept. 110), S. L. Ackerman (Dept. 510), P. R. Lewellen (Dept. 756), Frank Budz (Dept. 772), D. D. White (Dept. 130), A. T. Wood (Dept. 110), D. J. LaBorde (Dept. 758), Art Wrightson (Dept. 181) and D. R. Collins (Dept. 541).

\$12 Million Pay Boost Ahead For All Convair

A 3 per cent wage and salary increase affecting more than 62,000 Convair employees was announced last week.

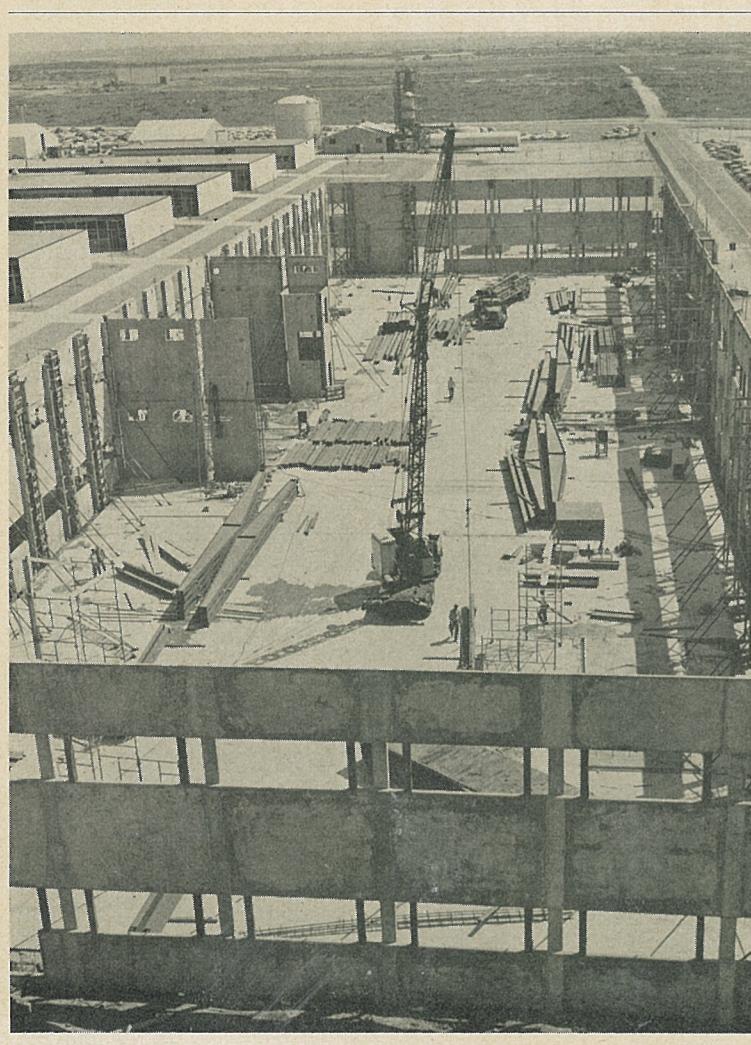
It will mean a total of more than \$12 million additional pay during the next year, R. H. Biron, Convair vice president-administration, said. Increases become effective at various intervals between now and Aug. 3.

While the starting dates of the increased compensation in many cases are tied to contracts negotiated about a year ago with at least seven labor unions in Southern California and Texas, 16,866 non-represented hourly and flat-salary employees will receive the

same percentage raises, Biron said.

In the San Diego area, where more than 37,600 Convair employees will be affected by the pay raises, the company's annual payroll will rise by \$6,848,480, Biron said. An additional \$390,000 a year in increased pay is in prospect for Convair San Diego employees working at such off-site bases as Palmdale, Edwards Air Force Base, and other locations.

In the Pomona area, where Convair produces Terrier and Tartar guided missiles for the U.S. Navy, the 3 per cent raises (Continued on Page 2)



A BUILDING IS BORN—Ground was broken scarcely two months ago for new office building at Astro. This is scene as of early last week.



HAVE ONE, FRIEND—No blessed events here, it's politics. Chance meeting of aspirants for Astro Management Club presidency brought on this exchange. Left to right are Dick Campbell, Fred Baebler and Irv Jenkins. Ballots are out, due back May 15.

\$12 Million Pay Boost Ahead For All Convair

(Continued from Page 1) will account for \$960,000 more income per year.

The raises became effective Monday (April 27) for 13,155 non-union salaried employees at San Diego, Fort Worth, Pomona and Astronautics.

May 4 will be the effective date for a total of 26,577 hourly employees. Of these, 22,928 are represented by International Association of Machinists unions at Astronautics and Convair SD, 18 by the Pattern Makers Association of Los Angeles and Vicinity at Convair SD and 75 by the United Welders Association of America at Astronautics.

Non-represented hourly workers at all divisions and General Offices also will receive the 3 per cent increase at that time.

On May 18, 10,262 hourly workers represented by the IAM at Fort Worth, as well as 2,744 salaried and hourly employees in the Engineers and Architects Association bargaining unit at Astronautics and 15,454 in the same jurisdiction as SD Division will receive their 3 per cent increase.

The 2,081 hourly employees in

the IAM union jurisdiction at Pomona will receive their 3 per cent raises, starting June 8, and on July 6, 73 Astronautics employees in the I.B.E.W. bargaining unit will receive their pay raises.

Fifty-two salaried and hourly employees at SD Division, represented by the International Alliance of Theatrical Stage Employees and Motion Picture Operators of the United States and Canada, will receive a 3 per cent raise, effective Aug. 3.

Biron said the raises will be reflected on the second paychecks issued after the effective dates for each union or non-union grouping of employees.

Astro Men Appear On TV Marathon

Two Convair employees, Jerry Brown and Joe Jones, made a special appearance on a cerebral palsy telethon TV program originating at Orlando, Fla., April 15.

The pair, employed by Astronautics at AFMTC, presented a \$500 check to the drive on behalf of all Astro Con-Trib-Club members at AFMTC.

With two stars from the TV program "Gunsmoke" as emcees, the program saw \$100,000 pledged, some \$35,000 above the original goal.

Astro employees at AFMTC are currently conducting a drive to enlist new members in Con-Trib-Club.

Librarians to Tour Astro, Hear Penick

About 150 persons are expected to be on hand Saturday (May 2) for a tour of Convair Astronautics' technical library and a speech by E. S. Penick, Astro assistant project engineer.

The visitors, members or guests of the Special Libraries Association, Southern California Chapter, will be attending a one-day meeting sponsored by the Science-Technology Division of SLA. Louis Canter, Astro's chief librarian, is the division chairman.

Penick will speak on "T-Day, Cape Canaveral" and illustrate his talk with a short film. The Astro library visit follows a noon luncheon at Town and Country Hotel.

ENGINEERS URGED TO TAKE CALIFORNIA STATE BOARD EXAM

B. F. Coggan, Convair vice president and SD Division manager, and three other Convair SD and Astronautics engineers have qualified recently as professional engineers certified by the California state board.

Besides Coggan, Ernest A. Hamilton and James E. Fithian of Dept. 547-3 of Astro, and R. H. R'dnour of SD Dept. 6 have received certificates signifying that they are registered as professional engineers in the state of California. They qualified by passing the last professional engineering examination.

Convair Divisions are encouraging the qualification of their engineers under state registration to raise the standards of engineering personnel, increasing the competence of the individual and the engineering departments, thereby adding prestige to individuals as well as Convair.

Of the more than 3,000 engineers in Convair SD and Astro Divisions less than five per cent are registered professional engineers.

The requirements for qualification, although basically calling for an engineering degree and two years' experience at a professional level, nevertheless give engineers who have no formal degree but a wide background an opportunity to prove their ability and become qualified professionals.

Before they can take professional engineers examinations, engineers must first pass the engineer-in-training exams. These can be attempted at any time after receiving a degree.

The examinations are given in San Diego at eight-month intervals with four months between the engineer-in-training and professional engineer examinations.

Registration is closed for the next examination in August, but is open to anyone wishing to prepare for the spring exams. Application forms are available at educational services offices at both divisions. Information may be obtained through the office of the State Contractors License Board, AT-1-0427, or from C. G. Erickson, ext. 2324 at Astro site. Erickson is a member of the registration committee of the SD Section of the California Society of Professional Engineers.

Moves Continue On Schedule

(Continued from Page 1) fling has been in progress on the top floors of the major office buildings (Bldgs. 1 and 3). And some personnel on the fourth and fifth floors of Bldg. 1 have been involved.

Three tool functions get into the "act" in the next three weeks. Jigs and fixtures (Dept. 451) and the welding area (Dept. 452) move into the area vacated by raw stores, while tool and die (Dept. 452) moves over into the vacated jigs and fixtures area.

Dozen Candidates Seek Scholarship

Preliminary elimination in the first annual Astronautics Management Club scholarship program has narrowed the field to about a dozen candidates.

On May 23 those selected for final judging will meet with a panel of three outside judges. One boy and one girl will be selected to receive \$500 scholarships. Runners-up will receive \$100 Savings Bonds.

Handling details are Owen Huff, chairman, John Andrews, William Tomasin, Ward Soule, Dave Garber and John Thoma.

TOASTMASTERS CLUB PLANS LADIES' NIGHT

First Monday of each month has been designated "Ladies' Night" for Convair Toastmasters Club No. 457. Members will be joined by their ladies at the May 4 dinner meeting.



SERIOUS MOOD—Astro Management Club members heard August C. Esenwein, Convair executive vice president, discuss "Yardstick of Success" at April 15 meeting. Esenwein said Astro personnel measure high in many fields.

Esenwein Emphasizes Need For Smooth Communications

(Continued from Page 1) success, Esenwein touched on Astro's past, present and future.

He spoke of market, products, organization, administration, sales and profits.

To each he gave his personal opinions on how Astro measured. Most drew high praise. A few brought calm words of caution and encouragement.

"We all have a long way to go," Esenwein added.

Listeners, however, felt that Esenwein was at his best in discussing the simple, personal things which can be applied in measuring individual success. His quiet, pointed explanations on this subject left little to be imagined.

R. R. Sodomka's Son Is Winner

Raymond Roland Sodomka Jr., son of R. R. Sodomka, tool engineering assistant supervisor, has been named winner of the 1959 Convair son scholarship program at Convair Astronautics.

Announcement of the selection came this week from J. R. Dempsey, Astro manager.

Young Sodomka was selected from a field of six candidates. He receives a scholarship leading to a degree in engineering or an allied course at any accredited college or university of his choice.

Graduating this year from Helix High School, Sodomka is ranked as the top student of 303 in his class. He is a member of the California Scholarship Federation, Science Club, and editor of the "Chanter," school magazine. His interests include algebra and physics. He played freshman football and is an active stamp and coin collector, fern culturist, canary raiser and hiker.

Planning to major in mathematics, Sodomka is interested in entering Stanford University.

Esenwein said that common courtesy to those below and above us is essential to respect and dedication. Without it, no job can be performed adequately.

And he stressed the need for brief, uncluttered communication which leads to understanding without confusion. This, he said, must be practiced at all levels.

Esenwein touched on many subjects. He talked of quality control, reliability, safety, service and citizenship, flexibility, stability, employee relations, recreation, labor relations, loyalty, dedication and ability.

In final analysis, he pointed out that Astro can be justly proud of a strong, determined organization with talented and devoted men and women doing their best for a common goal.

"A decade ago, scientists and engineers said the Atlas concept was not practical," Esenwein said. "Your curiosity and initiative proved them wrong. The future holds great things for you. If you meet it with the same determination you now show, there is little doubt of your success."

Esenwein was introduced by J. A. Dufresne, Astro controller, for the sponsoring department.

Earlier, W. E. Bowman, chief of industrial security, received the club's missileman-of-the-month award.

W. L. Van Horn, nomination committee chairman, presented the candidates selected for the coming club election. There were no nominations from the floor.

Estimating Shifted To Long Range Plans

An organizational change at Convair Astronautics this week saw the estimating section, formerly a controller's function, transferred to long range planning.

However, the project analysis section of estimating remained within the controller's organization.



WELCOME ABOARD—Raymond R. Sodomka Jr., winner of 1959 Astro Convair son scholarship, receives good tidings and congratulations from J. R. Dempsey, left, Astro manager, and Mortimer Rosenbaum, chief engineer. Field of six candidates took part.

Convairity

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations. General Offices, San Diego, Calif. Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

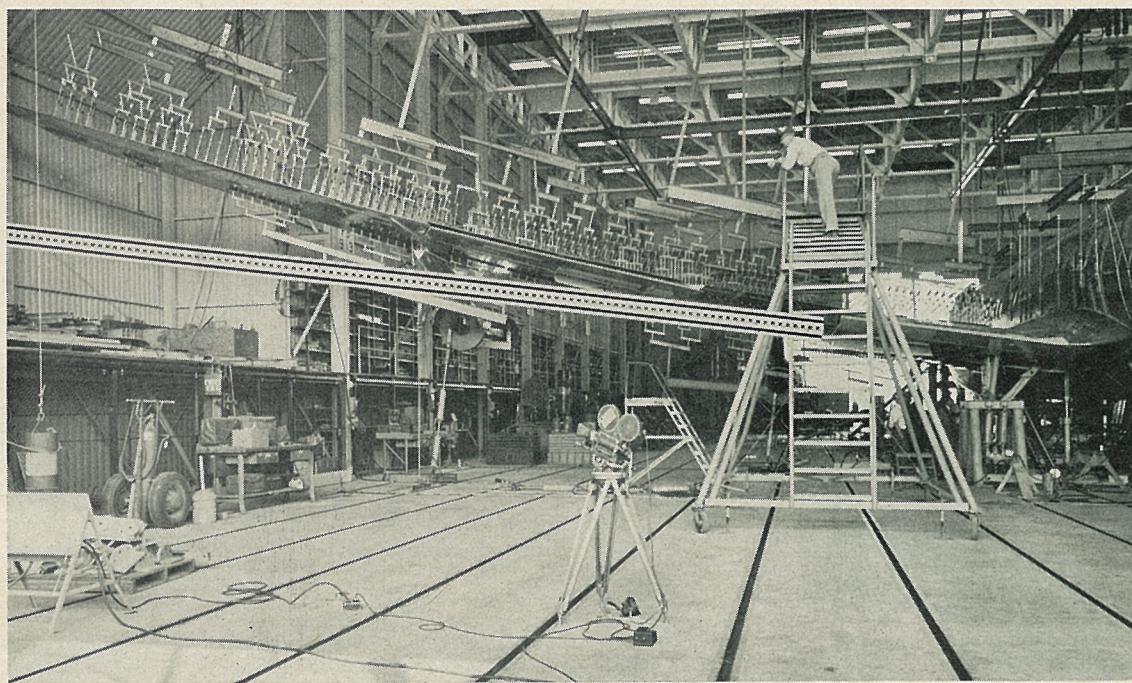
SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Gracey Fath, Helen Pemberton, Fred Bettiger.

Astronautics Editorial Offices, Bldg. 2, new plant, ext. 1154. Staff: Bryan Weckersheimer, news editor.

FW Editorial Offices, Col. 73C, ext. 2961. Mailing address: Convairity, Convair, Fort Worth, Texas. Telephone PErshing 8-7311. Staff: Bob Vollmer, news editor; H. A. "Pat" Baker Jr., Mary Beck.

Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Offices, Room 31, Bldg. 301B, Palmdale, ext. 337. Staff: Betty Lou Nash.



IN FLIGHT—Fuselage and wings of Convair's No. 2 880 under full load for first time at SD structures lab facility at seaplane ramp passed critical flight condition testing satisfactorily. Picture shows maximum upward deflection of wing tip, five feet above normal position (marked by artist's line). Adjusting jig fixtures is H. H. Runyan of Dept. 6, structures group.

Sam Keith Re-elected Head of Goodwill

Sam E. Keith of Convair Fort Worth was re-elected this month as president of Goodwill Industries, Inc., of Fort Worth.

Goodwill, an agency of the United Fund, provides employment for handicapped people.

880 Wing Bent Upward In Structural Testing

No. 2 Convair 880, now undergoing structural tests, passed its third major trial with flying colors this month.

Fully loaded for the first time

to test out critical flight conditions, 880 No. 2 passed its critical wing bending, shear, and torsion tests "most satisfactorily," said W. E. Wise, group engineer in charge of the testing program at the seaplane ramp at San Diego.

Simulating a positive maneuver flight condition, in other words, a stall of the plane at approximately 40,000-ft. altitude and speed of Mach .89, a total load of 154,000 lbs. was applied to the plane. The plane was made "weightless," in effect, floating free in the hangar, with the whole plane lifted by means of the weight relief hydraulic system.

In the tests the wing tips were flexed upward to the maximum point—approximately five feet from the normal straight line position.

Complying with Federal Aviation Agency requirements to prove out the plane's capabilities at different gross weights and altitudes, the test was made with and without pressure. The full-load test was repeated the next night with the cabin fully pressurized with air, the test conducted by remote control. Results were observed by closed circuit television in the central control headquarters.

Eighteen test lab mechanics of Dept. 31 under Wyatt Ingram, assistant foreman of the day shift, and Connie Bley, night shift, support the engineers conducting the test program. They are responsible for construction, checking, and maintenance of all the physical hardware and installation of jig fabrication used to put different loads on the plane.

"Structural tests on the 880 have been running so smoothly that we are now six weeks ahead of schedule," commented Wise. "We are now nearly 60 per cent through the test program on Plane No. 2."

Next on the program is local testing of the horizontal tail, pods and pylons, fuel calibration, and completely-loaded fuselage tests in simulated landing conditions.

Research Lab To be Dedicated

Convair San Diego's \$2-million high temperature structures research laboratory will be formally dedicated at a May 13 ceremony.

The modern testing facility, located at the seaplane ramp, includes a 100x200-ft. enclosed facility for structural tests on planes and plane sections, new office building, and outside testing area. The research facility was built by Convair to be used as an inter-division installation.

Invited to dedication ceremonies will be General Dynamics and Convair officials, SD Division management and engineering administrative personnel, and equipment manufacturers.

F-106s and F-102s to Take Part In Armed Forces Day Exhibits

Antelope Valley residents will have an opportunity to inspect the latest experiments and production aircraft, including Convair's F-102 and F-106 jet interceptors, at two open house events planned in observance of Armed Forces Day.

Static displays and fly-bys will be featured Saturday (May 16) at Air Force Plant 42, home of the Convair Palmdale facility, and on May 16 and 17 at Edwards Air Force Base, home of Convair Edwards facility.

At Palmdale Plant 42, static displays by tenant contractors will be arranged in the vicinity of the Air Force administration building on the south side of the field. Entrance to the area may be gained by way of 20th Street East, Ave. P or Ave Q. Plans

for the day also include fire fighting and helicopter demonstrations.

Arrangements are being made by Plant 42 public relations subcommittee with R. B. Merwin chief of industrial relations, Palmdale, representing Convair.

Edwards Air Force Base will hold open house both Saturday and Sunday (May 16 and 17). Scientific demonstrations showing the research and development work at Edwards will be located in the huge maintenance and modification hangar, which covers an area the size of three football fields. The newest Air Force, Navy and Army weapon systems will be exhibited on the flight line.

Time schedules of fly-bys at both Palmdale and Edwards will be announced later.



ISOLATED—In top photo, C. F. Morris, right, of manufacturing research at Fort Worth and B. R. Proctor of Dept. 81-8 conduct test with piece of beryllium. "Space" suits are protective measure. Below, preparing to leave lab, they vacuum each other to pick up beryllium dust. Beryllium is under test by FW manufacturing research engineers for use in missiles and aircraft because of heat-resistant and high strength-to-weight characteristics.

'Space' Outfits Protect Special Metal Testers

Beryllium—the industry's latest glamour metal—is now undergoing a rigorous test series at Convair Fort Worth to determine how the precious metal may best be handled in the factory for use in the missiles and aircraft of the future.

As beryllium cannot be worked without special dust collecting equipment, the tests are being conducted in septicly clean vacuumed room in the Dept. 81 area on the mezzanine.

The project is under contract with the Air Force and is designed to see how versatile this heat-resisting metal can be.

It's important for future Air Force use because of its heat-resistant characteristics and strength-to-weight ratio, manufacturing research engineers pointed out.

C. F. Morris of manufacturing research is conducting the tests with the help of B. R. Proctor of Dept. 81-8.

All precautions necessary to protect employees are being taken, according to Fred Temple, chief safety engineer, and Dr. J. K. Leverett, plant physician.

Morris and Proctor, who both

underwent rigorous physicals prior to the project, wear a type of space outfit throughout the tests. Their uniforms, which include air line respirators, coveralls, rubber gloves and shoe covers, give them the appearance of Marsmen from outer space.

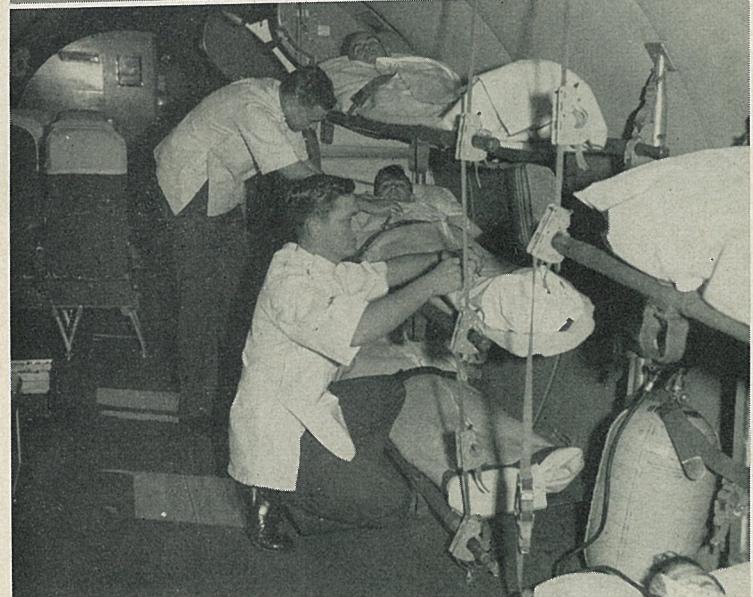
Inside the 8 by 8-foot test lab is a vacuum-type machine which collects beryllium dust particles in the air for later analysis.

Present testing has to do with how well the metal will bend at different temperatures. Engineers are also cutting into it with regular band saws.

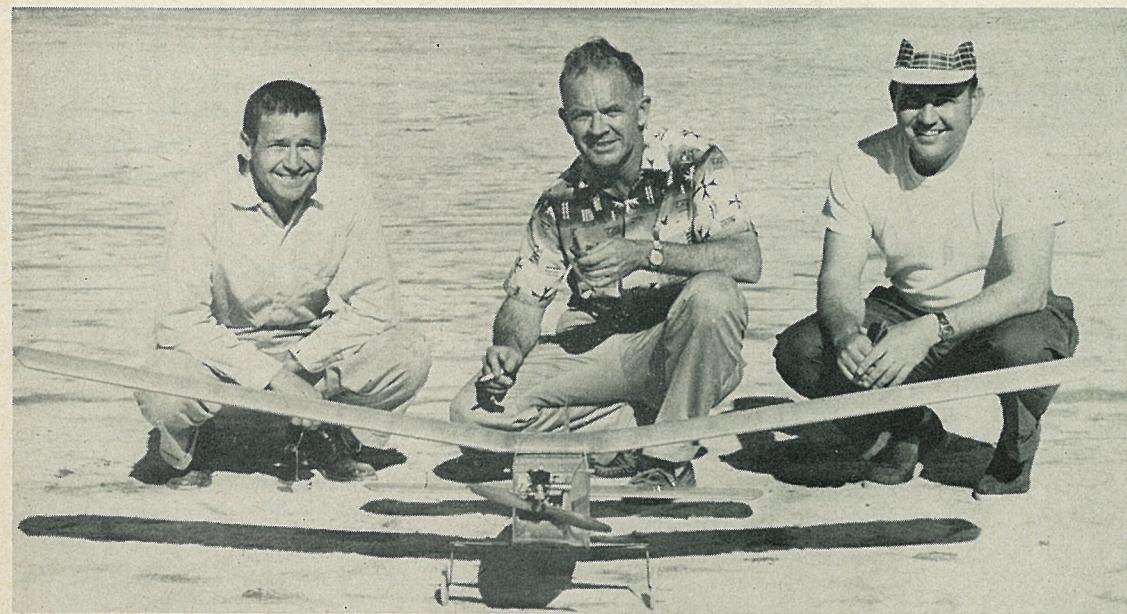
An added safety feature on the band saw is a dust collector which gathers the metal particles at the point of the cut. Scraps and waste particles are carefully disposed of.

After the testing is over each day, Morris and Proctor run a vacuum cleaner type of apparatus over themselves, wash out the lab and change into another set of coveralls. They then change from the second set of coveralls back into street and work clothes after they leave the test room.

The beryllium sheet metal being tested costs around \$300 per pound.



SAMARITANS IN ACTION—Convair C-131 "flying hospitals" have lived up to Convair-Liner's great record for safety and service. Above are scenes of First Aeromedical Transport Group personnel in action at Brooks AFB.



NEW RECORD—Convair Pomona's R. A. "Dick" Everett (Dept. 31), center, has another world record in model airplane flying. Radio-controlled plane shown here recently flew approximately 38 miles. At left is Bob Munson (Dept. 6) and at right is Capt. W. E. Burks, USAF. Both assisted in tracking flight.

World Model Plane Distance Record Shattered by 37-mile, 47 mph Flight

Dick Everett, Convair Pomona's internationally-recognized authority on model airplanes, has added still another honor to his endless string of records and championships.

This time he has—although it has not yet been officially recognized by Federation Aeronautique Internationale—set a new distance record for radio controlled model planes. Everett's new record is 37.1 miles. The old record was 8.61 miles.

The flight began in Daggett, Calif., and ended at a previously-selected spot near Ludlow on April 12. The plane traveled at a ground speed of about 47 miles per hour. Everett controlled the flight from the rear seat of a convertible.

The plane, which Everett designed and built, has a wing-spread of six-and-a-half feet, an over-all length of 51 inches and an empty weight of five-and-a-

half pounds. The framework is built of balsa and plywood, the wings and tail are covered with silk, and the fuselage is covered with nylon. The plane is powered by a Torpedo 19 engine, and is controlled by a five-channel radio.

"The work involved in claiming a new record amounted to more time than was required to build the plane and make the flight," Everett said.

The "paper work" included filling out five sets of forms in triplicate, three sets of three-view drawings to metric scale, calculating the course flown in meters, using spherical trigonometry, and three pictures of the plane.

Model building and flying is more of an obsession than a hobby with Everett. He has set numerous national records, and has won more national, local, state and regional championships

than he can remember. He has built and flown all types of models—gliders, radio controlled, free flight, etc.

Next week he will leave for Japan to conduct a clinic on "how to direct model aircraft contests" for hobby and craft directors of the Pacific Air Force, and also to serve as contest director for the PAF model championship meet. He will be in Japan, as a guest of the Air Force, for approximately 15 days.

This will be Everett's third trip to Japan for the armed forces in the past four years. His first trip was also for the Air Force, in 1956, when he conducted a model aircraft clinic and served as a contest director. In 1957 he visited Japan at the request of Armed Forces Far East to conduct a clinic and to teach a course in model building and contest direction to Hobby and Craft directors.

Model building and flying is more of an obsession than a hobby with Everett. He has set numerous national records, and has won more national, local, state and regional championships

in the Pacific.

"There were over 2,000 of us in the camp, and although we received brutal treatment it was much better than the military prisoners received in other camps," Messenger recalled.

Messenger created their own democratic government and

selected a committee to act as a governing body and to protest measures not in accordance with international regulations governing civilian internees. They also established an educational system—a number of college professors were among the internees—and taught courses of all kinds.

Messenger studied college-level courses in algebra, analytic geometry, differential and integral calculus, statistics, dynamics, strength of materials and introductory courses in civil engineering and magnetism. He taught courses in radio communications and meteorology.

"We did everything we could think of to keep our minds occupied and to make time pass more quickly," he said.

"Our release was very spectacular. At 7 a.m. we were lined up for roll call and the Jap soldiers were in formation for calisthenics. American troop planes flew overhead, and as the first paratrooper dropped, Rangers and guerrillas, who had surrounded the camp in secrecy, opened fire. It was all over in 15 minutes. Amtracks rolled up to the hospital to evacuate the sick and wounded, and four hours later all 2,100 of us were safe."

A few days—and several spools of red tape in obtaining transportation—later, the five Convair men were re-united with their families in the U. S. One of the six had died in a bombing attack on Corregidor.

After his return, Messenger became a navigator and later supervisor of training and navigation for the Consairway Division. He terminated when the Consairway contract was cancelled by the Air Transport Command.

Before rejoining Convair last August he was vice president of International Aircraft Maintenance Company.



RETURNS—George Messenger, veteran Convair man who was captured while assigned to Philippines at outbreak of World War II, holds copy of "Flight Deck," old Consairway Division paper, which is among his mementos.

Speedy Runners

Ancient Pastime of 'Coursing' Revived With 40-mph Whippets

A Convair SD man owns two of the fastest domesticated animals in existence.

Duke and Toby, a brace of pedigreed whippets, "stretch their legs" three times a week on the Mission Bay salt-beds, near metropolitan San Diego.

Owned by C. V. Hershberger of Convair SD, Dept. 15, the whippets zoom down the flats, sometimes reaching the astounding speed of 40 mph.

"In a 300-yd. dash they attain top speed the fastest and can out-distance any quarterhorse or racing greyhound, but on a longer course, their stamina would give way," Hershberger says.

Whippets are a pint-sized version of the racing greyhound. Unlike other hunting dogs, the whippet lopes along with head swinging back and forth, looking—not trying to pick up scent—for jackrabbits. Once the prey is spotted, Duke and Toby flash their vaunted speed. Working as a brace they close in on the frantic rabbit, with the final scene usually lost in a cloud of dust.

Coursing, as the sport is known, is not the popular pastime it was in previous centuries, Hershberger said.

Both whippets and coursing can be traced back to the days of ancient Egypt, through the Ro-

man civilization and into medieval England, where, as the expression went, "no mean man" dared own a whippet.

But in the U. S. whippets became the "poor man's racehorse" and many a wager was laid on the outcome of a coursing event.

Hershberger, however, loves the sport for the sport's sake. He says Duke and Toby are excellent playmates for his two young children.

SD Man Co-Chairmen Management Meet

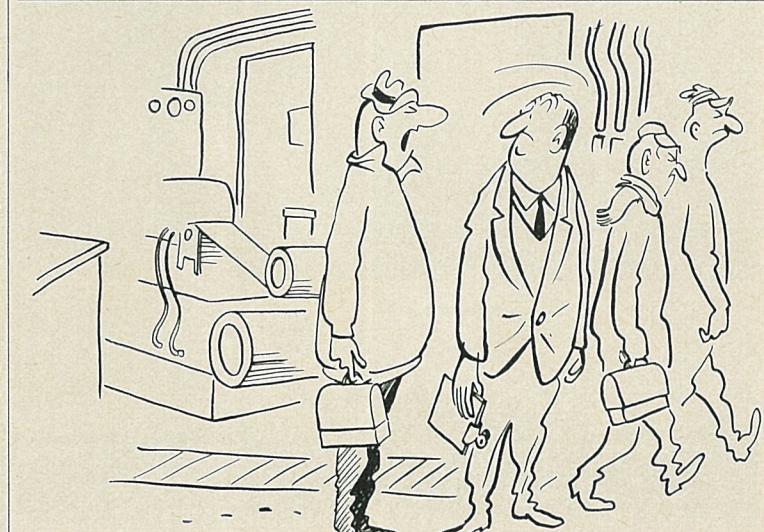
C. L. Terrel of Convair SD is serving as co-chairman of the Second Annual Southern California Management Conference May 7-8 at the Disneyland Hotel, Anaheim.

As president of the San Diego chapter of Society for the Advancement of Management, Terrel has been named to assist the general chairman, Vernon A. Metzger of Long Beach State College.

Terrel, staff consultant to assistant chief engineering administration at SD, will moderate the May 7 afternoon panel session on "Managerial Skills for a New Age." Convention theme is "Management in Transition."



SPEEDSTERS—Duke and Toby, a brace of pedigreed whippets, give their owner, C. V. Hershberger of Convair SD, a real "run for his money." They are able to attain a top speed of 40 mph.

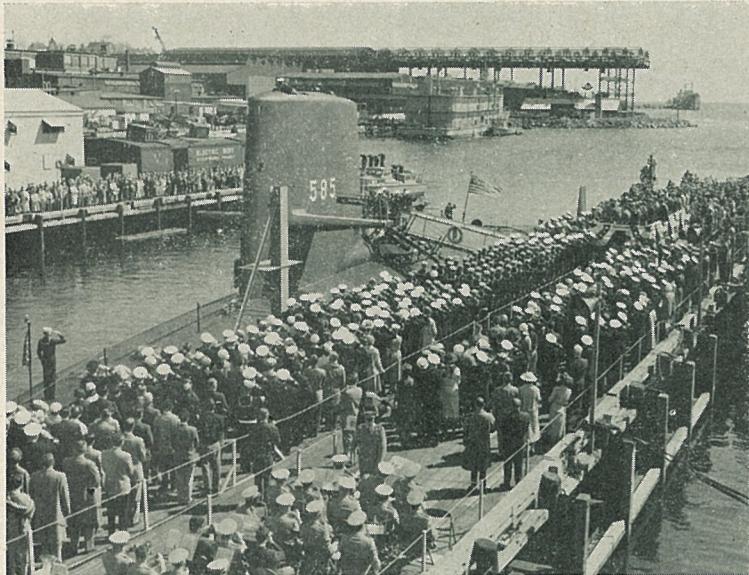


"Our driver took th' new freeway that got us here twenty minutes sooner, but it took another THIRTY minutes to pry his hands off th' steerin' wheel!"

NEWS FROM OTHER DIVISIONS OF GENERAL DYNAMICS CORP.

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair Ltd. of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., aircraft, missiles and space systems.
Electric Boat of Groton, Conn., submarines.
Stromberg-Carlson, of Rochester, N. Y., telecommunications, electronic equipment.
Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.
General Atomic of San Diego, Calif., nuclear research, development, production.
Electro Dynamic of Bayonne, N. J., electric motors, generators.



FASTEAST—Stars and stripes go up on stern of nuclear powered Skipjack, world's fastest, at commissioning April 15 at Groton, Conn., shipyard of Electric Boat Division.

Skipjack Joins Fleet, Fastest, Deadliest Sub

GROTON—USS Skipjack, the world's fastest and deadliest nuclear submarine, became a unit of the U. S. Navy during commissioning ceremonies at Electric Boat Division here.

Before an audience of more than 2,000 the whale-shaped attack submarine was accepted into the fleet by Rear Adm. Chester C. Wood, commandant of the Third Naval District. Cdr. W. W. Behrens Jr. assumed command of Skipjack and ordered her colors hoisted.

Principal speaker during the ceremonies was Adm. James S. Russell, Vice Chief of Naval Operations, who termed Skipjack

"the forerunner of a new generation of submarines."

"The combination of nuclear propulsion and streamlined hull gives her the greatest submarine performance of any ship in the fleet today," Admiral Russell declared. "She is controlled by a single man sitting at controls similar to aircraft controls. Her phenomenal speed and great maneuverability make her especially suited for carrying out her mission of attack."

Admiral Russell cited the builder, General Dynamics, for "the many outstanding contributions it has made in the development of submarines" and termed Skipjack the "latest creation of the engineering skill, dynamic imagination and productive know-how of the shipbuilders of Groton."

Earl D. Johnson, executive vice president of General Dynamics, turned the submarine over to the Navy, noting that Skipjack "has gone faster and deeper than any other submarine in the world. We know she has done what men only dared dream submarines would do just a few short years ago."

S-C Introducing New 'Stereo' 60

ROCHESTER—A new "Stereo 60" Control Amplifier, Model ASR-444, has been introduced by the Stromberg-Carlson Division.

The "Stereo 60" is a complete stereophonic amplifier and pre-amp, with each channel providing 30 watts of rated power, and with peak power handling capacity of 60 watts in each channel.

PR Manager Named By General Atomic

SAN DIEGO—Douglas M. Fouquet has been appointed manager of public relations and advertising for General Atomic Division.

Fouquet has been associated with the U. S. atomic energy industry for several years in public relations, advertising, sales promotion, and marketing activities. At General Atomic, where he assumed his new duties on April 1, he will work directly with Everett R. Holles, director of communications and assistant to Dr. Frederic de Hoffmann, General Atomic manager.

Fouquet was graduated in 1951 from Harvard College and received his master's degree in business administration from Harvard Graduate School of Business Administration.



NATO ANNIVERSARY—Frank Pace Jr., left, board chairman of General Dynamics and head of American Council on NATO, took part in April 7 anniversary dinner this month observing 10th birthday of NATO. Others, from left, Gen. Lauris Norstad, supreme allied commander-Europe; Joseph M. A. Luns, foreign affairs minister for Netherlands; John W. Nason, president of American Foreign Policy Association.

540 Will Start Month Tour of South America

MONTREAL—A tour of South America by a Canadair-Convair 540 jet-prop transport, begins soon. The new Canadian aircraft will be demonstrated to airline operators, owners of executive aircraft, and military authorities.

The Canadair-Convair 540 is the jet-prop successor to the widely used Convair 240, 340, 440 series of piston-engined airliners of which more than 1,000 have been built.

The 540 has two Napier-Eland jet-prop engines which give it far higher speed, greater comfort, and much lower operating costs than its forerunners. It seats up to 58 passengers and flies at speeds up to 340 mph.

The South American tour of the 540 will last a month.

A similar tour of the United States and Western Canada began in March and a third 540 will tour Europe in June. The Canadian jet-prop, which is in production for the Royal Canadian Air Force, also was demonstrated at the World Congress of Flight at Las Vegas.

After flight trials early in the North American tour, Mohawk Airlines stated that the 540 improved block time by 10 to 15% over the carrier's Convair 240's on a five-stop round trip between Utica and Detroit. Allegheny Airlines were also impressed with the performance of the Canadair-Convair 540.

Canadair Announces Two Appointments

MONTREAL—Canadair announced two new appointments recently.

David W. H. Godfrey has joined the public relations department as assistant manager of information services. He has been assistant to the technical editor of The Aeroplane magazine in England.

Albert W. Yates, formerly of Fairchild Engine Division, has been appointed manager of military transport sales for Canadair. He attended Purdue University.

Fellowship Awarded To Stromberg Man

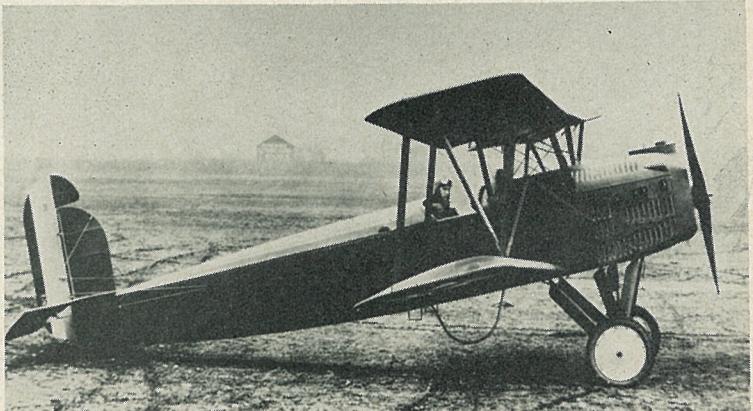
ROCHESTER—William J. Stolze, manager of the technical staff of the Electronics Division of Stromberg-Carlson, has been awarded an Alfred P. Sloan Fellowship in executive development, according to E. P. Brooks, dean of the School of Industrial Management at Massachusetts Institute of Technology.

Stolze is one of 45 outstanding young men throughout the country nominated by their companies and selected by M.I.T. for 12 months of study in depth of the fundamentals which underlie sound management action.

Microfilm Printer Rented by U.S. Navy

SAN DIEGO—Rental of an S-C 4020 High-Speed Microfilm Printer by the Navy, for delivery in 1959, has been announced by Stromberg-Carlson here.

The printer, designed for use with high-speed digital computers, will be installed at the David Taylor Model Basin, Carderock, Md. This equipment is capable of recording data on 35mm film at speeds up to 15,000 characters or 10,000 graph plotting points per second.



FIRST PRODUCT—A contract to build 20 TW-3 aircraft, such as this one, was first business obtained by newly formed Consolidated Aircraft in 1923.



FLEET OF 50—Competing against five other companies, Consolidated won design competition in 1923 for this PT-1, tandem trainer.

Newly-Formed Consolidated Acquires Contract For TW-3

(This is the seventh installment in a continuing history of Convair, based on research conducted by Howard O. Welty, now chief of editorial in Astronautics' communication department, and Nelson Fuller, manager of research and history, General Offices public relations.)

In 1923 Reuben H. Fleet set about forming his own aircraft company, Consolidated. He combined the assets of Gallaudet Aircraft of East Greenwich, R. I. with designs and engineering talent from Dayton-Wright Co. of Dayton, which was being dissolved as a subsidiary by General Motors.

From Dayton-Wright Fleet obtained the rights to all its plane designs, and the services of Col. Virginius E. Clark, the Dayton firm's chief design engineer since he resigned from the Air Service in 1921.

Clark was a Naval Academy

graduate of 1907 who transferred to the Coast Artillery in 1909. Developing an interest in aviation, he was detached for duty with the Signal Corps and served with the 1st Aero Corps at North Island. Later he took advanced study in Massachusetts and won the first doctor's degree in aeronautical engineering conferred by M.I.T.

For Dayton-Wright, Clark designed the TA-3 and TW-3 primary trainers, notable for having fuselage structures of mild steel tubing, a material that proved to be rugged and reasonably cheap to fabricate.

Along with Clark and the Dayton-Wright designs, Fleet acquired an uncompleted contract for 20 TW-3 aircraft. He and Clark were to parlay an improvement of this design into the foolproof, Consolidated trainer that virtually every Army and Navy airman had for primary instruction between 1925 and 1935.

That same year (1923) the Army announced a competition for an improved primary trainer. Clark designed a simple biplane of tubular steel fuselage construction, having the cockpits arranged in tandem. (In the side-by-side TW-3 neither student nor instructor had been satisfied.) After tryouts in which five other companies competed at Brooks Field, San Antonio, Consolidated won a contract for 50 PT-1 trainers. Fleet's fledgling enterprise was strongly in business. The next move was to find quarters to fit the contract.



FOUNDER—Wartime photo shows Reuben Fleet in uniform. Leaving service in fall of 1922, he formed Consolidated in following year.

'Aviation No Amusement': Trotsky 'Great Instrument of Future'

The year of Consolidated's founding, 1923, found the U. S. Aviation industry at a low ebb.

Things were different abroad. In England, airlines serving the Continent carried 45,531 passengers across the channel. In Russia, Minister of War Trotsky was quoted in Pravda: "Aviation is not an amusement, but the great instrument of the future."

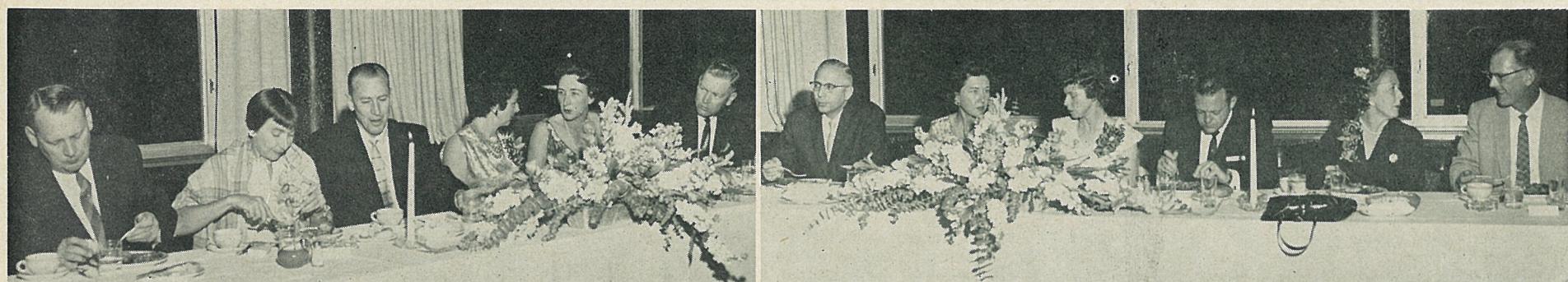
* * *
U. S. Army airmen recall

1923 as the year of three proud achievements.

The continent was flown non-stop for the first time, May 2-3, New York to San Diego.

The first refueling aloft was accomplished June 25, also at San Diego.

On Sept. 5, Brig. Gen. Billy Mitchell's bombers sank the obsolete battleships Virginia and New Jersey in the last of that airman's historic challenges to established military thought.



HEAD TABLE—This was head table at dinner honoring Astro CRA. From left, Art Munson, outgoing president, and Mrs. Munson; Mr. and Mrs. J. R. Mitchell, Mr. and Mrs. J. R. Dempsey, Mr. and Mrs. R. H. Biron, Mr. and Mrs. M. V. Wisdom, Mr. and Mrs. Art King.

Astro and SD Linksmen Tie

In what turned out to be a rather amazing coincidence, Astro and San Diego golfers tied with aggregate stroke totals of 1,043 in the first inter-division golf team match April 19 at Gilman Hot Springs. Pomona links men were third with 1,079.

The 12-man team winding up the May event with the lowest team total takes home a perpetual plaque to keep for one year.

Jack Abels paced Astro shot-makers with a 75. Team members included Jim Batson, Morris Baxter, Jack Albright, Frank Cook, Russ Gaughen, Hank Crouthamel, Andy Corrao, Forrest Erwin, Curt Hubbard, Ken Bradley and Harry Richards.

In a "moral" victory, Astro's Art King shot a 70 to pace the CRA commissioners from the other division. Ken Wulfemeyer of SD had a 93 and Wynn Lener of Pomona an 85. These scores had no bearing on overall totals.

Log Book Entries

Promotions

ASTRONAUTICS

Promotions and transfers to or within supervision effective April 13.

Dept. 182-0, Facilities Control: To facilities records and control supervisor, R. A. McClellan.

Dept. 214, Stores & Traffic: To receiving & stores asst. general foreman, J. F. Speed. To receiving & stores foreman, J. R. Tierney Jr. To shipping asst. foreman, R. L. Cox.

Dept. 215, Material Control: To material control supervisor, C. E. Stoll. To material control asst. supervisor, D. O. Berhow, D. L. Lewis.

Dept. 250, Plant Engineering: To sr. plant engineer-design, C. L. Hartshorn Jr. To plant engr. proj. contr. supervisor, P. Nico. To plant engr. proj. contr. asst. supervisor, A. F. Delos, W. E. Jones. To plant engineering supervisor, R. A. O'Connor. To plant engineering asst. supervisor, M. Parson. To foreman Gr. V, B. L. Keim. To asst. foreman Gr. V, B. Bourguignon, R. B. Mason.

Dept. 341-2, Support Supply: To GFE asst. supervisor, H. E. Mowery.

Dept. 342-2, Support Quality Control: To inspection asst. supervisor, Gr. V, C. L. Yelverton.

Dept. 402-0, Tool Design: To tooling asst. supervisor, J. B. Griffin. AFMTC

Transfers to supervision effective April 13.

Dept. 571-3, Convair Operations: To asst. foreman Gr. V, W. L. Goodwin. To manufacturing control foreman, B. J. Poole.

SYCAMORE

Transfer to supervision effective April 13.

Dept. 573-1, Convair Operations: To group engineer, R. R. Powell Jr.

VANDENBERG

Promotions and transfers to supervision effective April 13.

Dept. 576, Convair Operations: To flight test group engineer, F. X. Marshall Jr. To foreman, J. C. Ardoine. To asst. foreman, Gr. V, W. C. Barton, R. A. Brown.

WARREN

Transfer to supervision effective April 13.

Dept. 351-0, Convair Operations: To chief of industrial relations-test base: J. N. Mattson.

Service Emblems

Service emblems due during the period April 16 through April 30.

Fifteen-year: Dept. 215-1, A. M. Goldstein; Dept. 280-2, M. L. Berry; Dept. 322-5, Alfred Wilson; Dept. 545-5, Harold Wenberg; Dept. 731-0, V. E. Hoagland.

Ten-year: Dept. 214-2, R. G. Anderson; Dept. 325-2, V. E. Distad; Dept. 541-5, C. L. Maine; Dept. 772, W. D. Werts.

SYCAMORE

Service emblem due April 22.

Ten-year: Dept. 573-3, K. F. Eveland.

Births

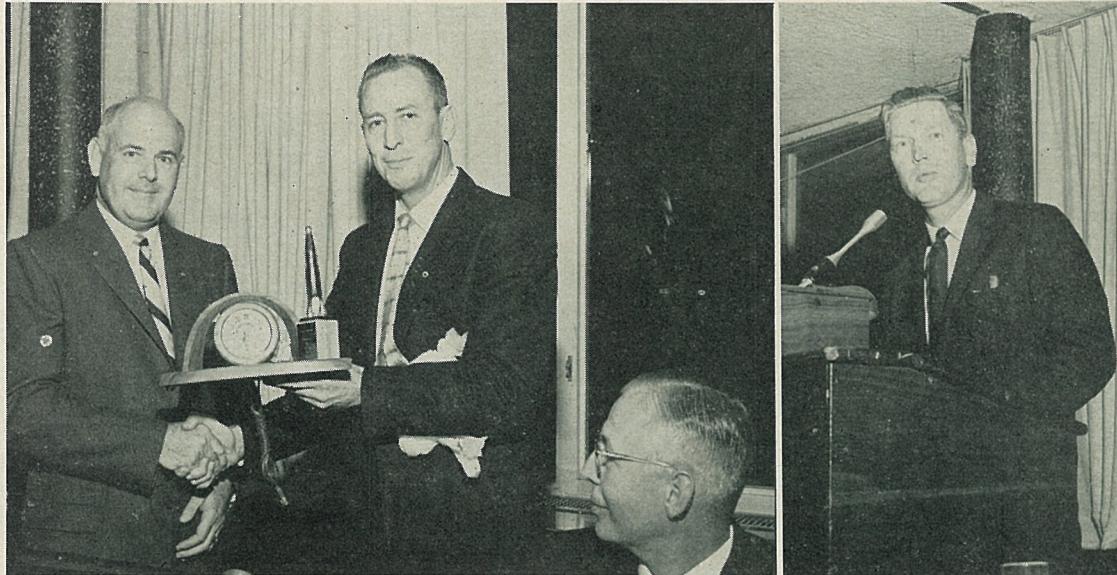
AIFEROS—Son, Ronald, 9 lbs., 1 oz., born March 24 to Mr. and Mrs. Al Aiferos, Dept. 578-3.

HOLMES—Daughter, Lisa Marie, 6 lbs., 10 1/2 oz., born April 21 to Mr. and Mrs. Lowell Holmes, Dept. 220.

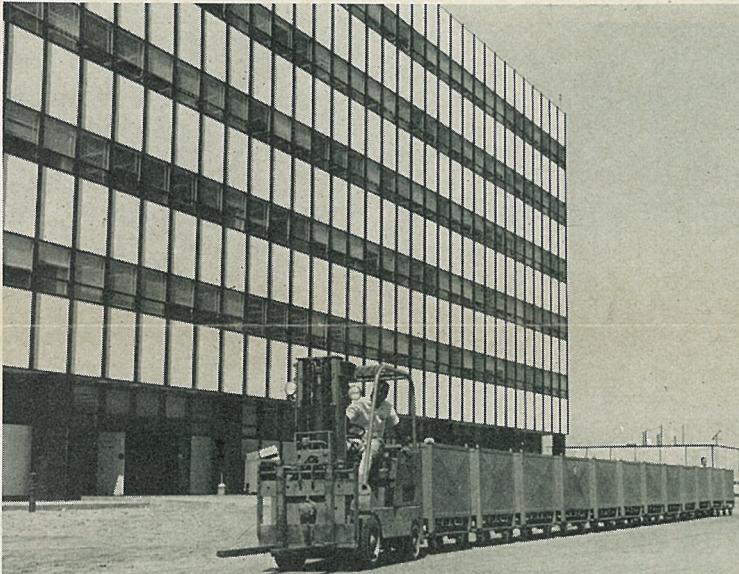
POLLARD—Son, Ronald Lee, 9 lbs., 3 oz., born April 15 to Mr. and Mrs. Renny Pollard, Dept. 571-3.

Lost & Found

Robert E. Lechien, ext. 1631 or BR-7-4413, would like to contact employees who might have seen a red and white 1949 Mustang motorcycle removed from parking lot near Bldg. 1 on April 17.



ANNUAL HONOR—Once each year Convair management takes time out to honor men and women of CRA at dinner-dance. At left is Ezra Johnson (Dept. 771) receiving CRA "Man-of-the-Year" award from J. R. Mitchell, chief of employee services. Seated is R. H. Biron, Convair vice president-administration. At right is J. R. Dempsey, Astro manager, at speakers' stand.



MEET "GEEP"—Familiar sight at Astro is "geep," nickname for units which cart off all trash and scrap material to reclamation center for sorting. Materials are then offered for sale, either to employees or highest bidder.

Round Trip 'Train' Links Astro Plant Every Day With Big Reclamation Area

During 1958, reclamation center sales at Astronautics totaled over \$62,300.

The center is located in the northeast corner of the reservation, covering a 50,000-foot area. A dozen times a day a tow cart and a string of metal carts pay the center a visit and deposit waste paper, boxes, outdated parts, metal scraps and fragments of material collected throughout the plant.

Present business keeps 18 workers busy on two shifts at the center. Four are sales personnel under R. L. Eastberg as sales representative. The others are transportation employees under Tom Martinez. They collect, sort and prepare materials for sale.

Which items will be offered up for bid and which will be placed on direct sale to employees is determined by the Air Force. Employees are eligible to bid if they wish. Lists of material that will be offered for bid are worked up from time to time and are

Sunday to See First Baseball Workout

Astronautics CRA will hold its first baseball workout at 1:30 p.m. Sunday (May 3) at the Linda Vista ball park.

All players interested in trying out for summer league baseball are invited to attend. Further information is available through CRA. Call Elaine, ext. 1111.

Bargain Golf Class Slated

Special golf lessons, open to Astro and San Diego employees and members of their families, will be repeated again this year by popular request, according to Art King, Astro golf commissioner.

Slated for Mission Valley Country Club, the sessions open May 26 and May 28 and continue for a period of six weeks. Three classes each on Tuesdays and Thursdays will be scheduled. They begin at 4:30, 5:30 and 6:30 p.m.

However, only 10 students will be allowed in each class. Registration will be on a first-come, first-served basis. Total cost for the six one-hour lessons is \$10. This fee must be paid upon registration.

Contact employee services offices to enroll: Astro, ext. 1111; San Diego, ext. 1705.

Instructors will include three pros at each class from Mission Valley CC's regular staff of professionals, King said.

Astro Wife Scores Net 68 in Sweeps Over Balboa Course

Bill Wray and Fred Hawkins turned in gross 75s April 11-12 during Astro golf sweepstakes held at Balboa Park, but a Convair wife created the biggest stir of the golfing weekend.

Gladys Kuntze, wife of engineering's Herb Kuntze, became the first woman to finish in a ranking position. She shot a net 68 to finish just above J. B. Smith's net 67 in the 22 and up handicap bracket. Lowell Gordy was third low net with a 69.

Ed Vidovich had a gross 76 behind Wray and Hawkins in the 0-14 bracket. Low net went to Jack Albright with a 66, followed by Bob Jellison (68) and Gordon Woods (68).

Hartland Moran's gross 81 took honors in the 15-21 bracket with George Burst (84) and Ed Rylander (85) trailing. H. L. Montgomery and Larry Green had net 66s, while Jim Gordon and George Michalson tied with 69s.

Les Siemers topped the 22 and up for gross honors with a 92. G. E. Stackwick had a 94 and George Comfort a 95.

Meeting Dates Set For Astro Bridge

Astro Bridge Club meetings are now set for April 29, May 14 and 28 at the Barcelona Bridge Club, 4th and Juniper.

DAUGHTERS ELIGIBLE FOR MEXICO TOUR

Convair daughters of high school age are eligible for a two-week Mexico Friendship Tour sponsored by the Y-Teens of the YWCA. The tour starts June 28, ends July 12 and costs a total of \$325. Contact Elaine, ext. 1111.

Bob Nicholas Leads Divers on Points

With 60 active members, Astro Divers of CRA have witnessed some top competition over the past year as points were compiled toward the first diver of the year award.

Using an Olympic-type scoring system, points were given for top places in each contest. Final tabulations showed Bob Nicholas out front.

Trailing in order were Jorge Zorrilla, Herb Boynton, Joe Walker, Keith Kaonis and Wes Kauder.

New Archery Schedule Set

Thirty participants were on hand April 12 for a combined Astro-San Diego archery event at the Astro target range.

Garnering first place in their respective divisions were Astro's Willis Bangsberg, Harry Black, Gil Petzer and Kenny Bangsberg.

A new schedule to take advantage of longer daylight hours has been announced by Al Stone, CRA commissioner.

A team shoot has been scheduled for 5 p.m. each Wednesday at the Astro area. Teams will be selected by drawings based on established handicaps. If no handicap is available, the first three weeks will serve for this purpose.

Regular Sunday events during the summer begin promptly at 9 a.m.

The activities schedule for archers reads: May 2, work party to ready area; May 10, monthly shoot; May 30-31, Southern Border Trophy Shoot; June 10, beginning of summer afternoon team events.

Ski Grand Finale Joint Dinner-Dance At Mission Valley

A grand finale to the 1958-59 snow ski season will be held Saturday (May 2) at the Mission Valley Country Club (Terrace Room) when Astro and Convair SD Ski Clubs hold a joint dinner-dance.

Social hour is at 7, dinner at 8 p.m. Tickets are available from Spike Hissey, ext. 1095, Bill Witzell, ext. 1083, and Bob Kent, ext. 1731 at the Astro plant and Joan Brennen, ext. 523, Plant 2, or Al Kunde, ext. 1545, and Dick Warren, ext. 2608, at Plant 1.

Featured will be trophy presentations to top contestants in the Convair Open ski event held April 12 at Mammoth Mountain.

Astro's Evan Stover took top spot in this event with Elmer Moots and Syl Weindling finishing second and third. Ann Moots won the women's event. These four contestants came within 12 seconds of winning the entire event on a team basis. Winner was the San Diego Ski Club.

Expert on Minerals To Speak May 7

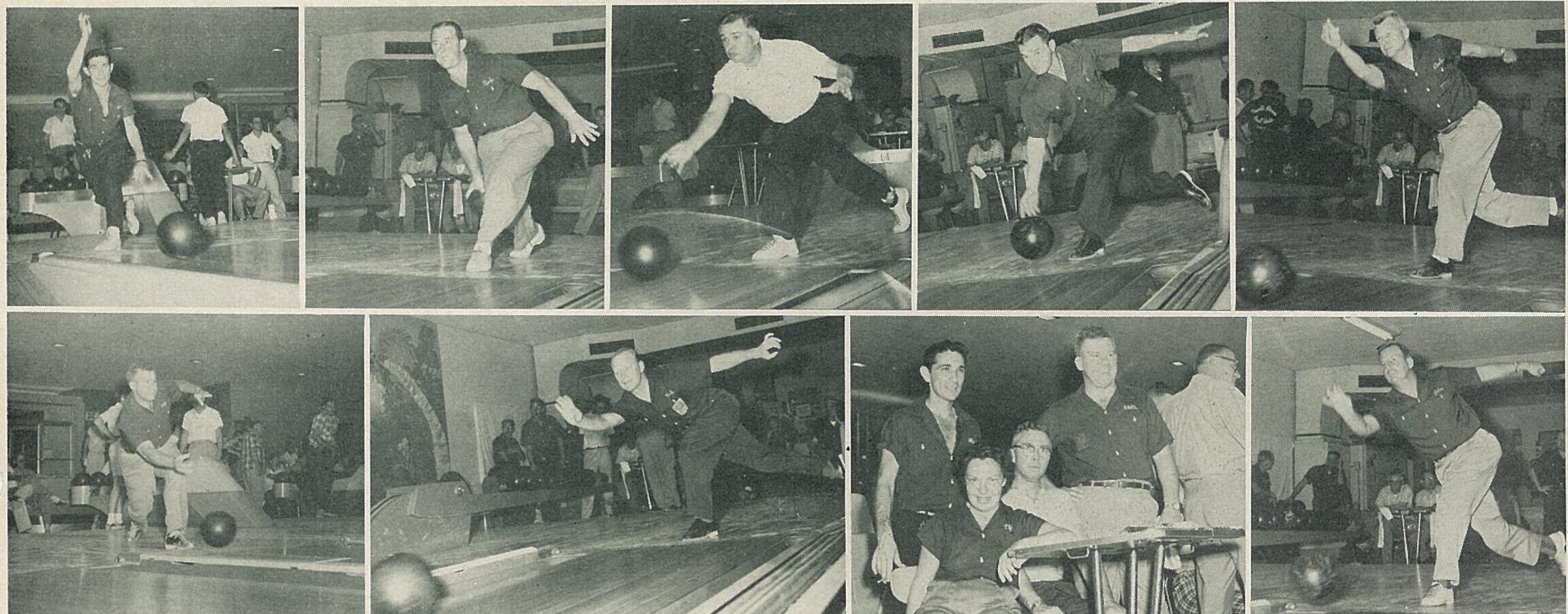
Roy Ketner Jr., a government mineralogist and expert on mineral deposits, will be guest speaker at a 7:30 p.m. meeting set for May 7 by the Astro Rockhounds in Astro's executive dining room.

Ketner will discuss active and inactive mines in the area and give the rock collectors some pointers on upcoming lapidary exhibits planned for local fairs and displays.

April found the Rockhounds forsaking a regular field trip to devote a day to working in the Astro CRA area adjacent to the plant. Members turned out at their convenience for this purpose.

LA JOLLA LENS MAN TO GIVE PROGRAM

Lynn Fyman, noted La Jolla photographer, will present a program of abstracts May 11 when the Astrolens hold a 7:30 p.m. meeting in the Astro cafeteria. Quarterly contest for the cameramen comes up May 25.



FLORIDA FORM—One of the most popular pastimes of Astro personnel at AFMTC is bowling. Tom Mahnken, Astro photographer, captured seriousness of moment at recent session. Across top, left to right, Andy Hardie, Bob Robbins,

Jack Lennon, Joe Longo and Bob Goldinger show their form. Same order at bottom are Earl Coon, Commissioner Jack Nichols, the "Slobs," a league-leading team composed of Toni Vegg, Darrell Hart, Hardie and Coon, and Jack Swigart.

Coming Events For The Girls:

Here, in brief form, are special activities of interest to women employees and wives and daughters. All are sponsored by CRA and represent reduced costs to participants.

WOMEN'S ACTIVITIES

April 30—Sleeping Beauty tickets at \$1 each available for 8:30 p.m. performance.

May 7—Intermediate golf instruction at Flying Hills. Six lessons at \$1 each. Register with Elaine, ext. 1111.

May 9—Beginning golf lessons at Coline Park. Five lessons for \$1. Course open for play afterwards. Contact Elaine, ext. 1111.

May 23—Women's Golf Club tournament at site to be selected. Contact employee services, ext. 1111, to sign up.

June 3—New beauty and charm course at John Robert Powers Studio. Regular \$255 course available with CRA subsidy for only \$55. Open to employees, wives and daughters. Register with Elaine, ext. 1111.

June—Harbor cruise being planned. Further information later.

ASTRO WIVES CLUB

May 7—Beginning golf lessons at Coline Park. Five lessons for \$1. Contact Jean Kegans at BR-7-6815.

May 7—Teen Age Dances now being held every other week at Astro cafeteria. Free instruction followed by social hour, parents invited to attend. Call Dixie, ext. 1111, or Sally Pry at HU-8-9431.

May—Fashion show and luncheon at Bowlero second week in May, date to be set. Barbara Mahaffey at BR-7-5094 or Luverne Vlachos at BR-3-0731 will accept reservations.

May 20—Wives Club meeting at 7:30 p.m., Astro executive dining room.

May 27—Wives Club luncheon at Lafayette Hotel. Dixie Husted at CY-5-0593 will accept necessary reservations.

ATLAS RALLY WINS PRAISE OF DRIVERS

With a hearty "well done" from 330 participants in the recent Atlas Rally still echoing loudly, Astro Sports Car Club this week announced plans for a second event next year.

The 165 cars entered in the April 12 event covered some 200 miles over an eight-hour period with San Diego Division's Dick Bauer, driver, and Bob Dunn, navigator, winning top honors.

For this event Astro drivers left competition to their visitors, acting as starters, timers, etc., to see that the rally operated smoothly.

An awards dinner at the Aztec Steak House saw some 70 trophies presented. Rallymaster was Bill Rector with George Kendall as his assistant.

CRA Sports & Recreation Convairity

New 'Brush-up' Dancing Begins For Astro Folk

New brush-up ballroom dancing classes, designed especially for adults, open next week under the sponsorship of Astronautics CRA.

Instruction is held at the McGrath Studio, 1322 Fifth Ave. One class is set for 8 p.m. each Tuesday beginning May 5, while the other will be held at 8:30 p.m. on Thursdays, starting May 7.

Both classes are planned to give the occasional adult dancer an opportunity to brush up on some of the old steps while learning some of the new. Lessons will cover a variety of steps.

Through CRA subsidy, costs are very nominal to Astro employees and members of their families. There are no contracts to sign. Fees are paid monthly and students may drop out at any time.

Other dance classes are offered at the same location throughout the week. Wednesday nights are devoted to teenagers.

Astro's 'Travelers' Planning Jaunt to Trailer Club Rally

Plans for a group tour to the Southern California Trailer Club rally May 16-17 at Pomona Fair Grounds are being formulated by the Astro Travelers.

Deadline for reservations for this event is May 6. Art Wrightson, ext. 1271, or Jerry Janda, ext. 1210, will accept reservations and furnish details.

The Travelers include owners of small trailers who journey to different points on field trips. April 11-12 found a trek to Ocotillo Wells on tap. Regular business meetings are the first Tuesday of each month in the Astro reception center (Bldg. 2) beginning at 7:30 p.m.

CRA Softball Team In City Loop Play

Astronautics sent a representative CRA softball team into action this week in the annual San Diego pre-season tournament.

There are still openings on this team for Astro softballers with previous experience. Contact Commissioner John Sentovic, ext. 1010, or Ray Mendoza, ext. 1111, for details.

Musicians Sought For CRA Orchestra

A group of "tuba tweeters" and "piccolo Petes" are beating the bushes at Convair Astronautics these days for men and women who play musical instruments.

Object: a band or bands to be formed under sponsorship of CRA.

Included in the group are those whose leanings are to concert, symphony and swing. Response will dictate what type band will be organized.

So that CRA may get some idea of interest, those playing musical instruments and interested in such an organization are asked to call Elaine, ext. 1111, whether they have an instrument or not.

25 Coin Collectors Attend Astro Sale, Repeat Meet Planned

Astro Coineers had a record 25 collectors on hand April 15 when they held a special auction and program at an Astro cafeteria meeting.

A repeat is expected at 7:30 p.m. May 20 when a similar meeting is again set for the cafeteria. The Coineers inform prospective members: "If you can't swap it, auction it." That's because both swap and auction events will be held. At the same time plans will be formulated for having members appear on television with their coins.

Ervin Knickerbocker won the "Atlas" trophy for the best display shown at the April meeting.

CRA Discount Tickets

The following discount tickets are available through employee services outlets:

DISNEYLAND — Membership cards allowing discount ticket purchases.

MARINELAND — Discount tickets available.

PADRE BASEBALL — Tickets allow discount seat purchases available for April 29, May 27 and June 3 games. Available two days before each game.

ROLLER SKATING — Free tickets available May 11 for May 18 session at Skateland.

SLEEPING BEAUTY — Limited tickets left for 8:30 p.m. performance April 30 at \$1 each.

SWIM NIGHT — Free tickets available May 11 for May 16 session at Mission Beach Plunge.

Astro Teams Bowling On Both U.S. Coasts

Wherever they are, Astronautics families like to bowl.

Reports from San Diego, the Air Force Missile Test Center in Florida and Vandenberg Air Force Base show a record number of pin choppers in action during the past months.

And at the present, keglers are turning on the steam as they roll the final rounds in winter competition and set their sights on additional action in the forthcoming CRA-sponsored summer leagues.

Jack Nichols, director of CRA bowling activities at AFMTC, reports winter action there has seen teams in action four nights each week. On Mondays a Titusville mixed league with Bob Harrell, president, Curt Johnston, vice president, Toni Vegg, secretary, and "Digger" Ljungquist, treasurer, is nearing completion.

Taking part in an independent men's scratch league on Mondays in Cocoa Beach is a Convair team composed of Bob Goldinger, Bob Robbins, Joe Longo, Pete Schrable, Jack Nichols, John Swigart and Dick Metcalf. This team will be sponsored by CRA in a Florida state tournament set for May 16-17 at Tampa.

Joe Longo heads a slate of officers including Travis Maloy, Chuck Pardy and Dick Nicholson who bowl on Tuesdays in a Cocoa Beach mixed league.

The girls get into action on Wednesdays in the Convair Astroettes loop. Maria Metcalf, Janet Robbins, Eleanor Goldinger, Billie Clopton and Ariel Nichols represented this group in a recent Florida event for women at Tampa.

Another ladies league rolled for the first time this year on Thursdays. Eleanor Goldinger, Helen Starkey, Janet Robbins and Ariel Nichols were league officers.

Commissioner Nichols indicated this week a joint bowling banquet will wind up winter activities on May 15.

Astro CRA teams in the San Diego area are rapidly approaching the end of a record season.

Some 123 teams composed of over 950 bowlers are now engaged in final winter activities. Over 1,000 bowlers participated in the first plant championship recently.

Present plans call for CRA to pick up the tab for entering all league winners (teams) in the June 6-7 Clairemont Bowl "League of Champions."

Summer leagues are being shaped up at Astro where additional alleys are being asked for the summer season. Plans call for mixed handicap leagues in the 600, 650, 700, 725 and 750 brackets. Men will take part in a 700 and 750 handicap program as well as an 800 scratch league.

New features planned for the summer are a mixed scratch (750) league and a mixed trio (480) league.

To assist keglers in entering summer action, Commissioners Willard Brassell and Jack Boyle have set up a special committee to accept entries and supply entry forms and information.

This group includes Brassell, ext. 1166; Ed Frankowski, ext. 1160; Frank Budz, ext. 860; Nancy Tatum, ext. 1401; Bill Geopfart, ext. 2139; Erv Campbell, Ed Lou and Vic Salgado, all at ext. 1115. Off-site calls may be directed to Larry Buckmaster, ext. 2150, Plant 1; Lorraine Sweeney, at Sycamore Canyon; Boyle, ext. 108 at Barnard School; and Chuck Kushera, ext. 1166, for the El Cajon Valley League.

Vandenberg AFB employees have the jump on others, starting summer action May 7 at the Santa Maria Rancho Bowl.

Officers for the summer league are: Don Wilson, president; Jeanne Johnson, vice president; and Ed Johnston, secretary-treasurer. Dave Vendeville serves as bowling commissioner at Vandenberg.



DIVING CHAMPS—Time out at recent outing found Astro Divers making diver of the year presentations. Keith Kaonis, right, does the honors for Bob Nicholas, Jorge Zorrilla and Herb Boynton who finished standings in that order. Photo by Pete Nelson.



INSIDE LOOK—Artist's drawing shows seating arrangement of first-class version of Convair 880 jet transport. Club compartment seats are under contract to Chance Vought Aircraft, Inc. First-class seats are being built by National Seating Co.

Key Performance Data on Jet Transports

Specification Details and Performance Data

Performance

Cruising speed
Range
Maximum cruise altitude
Rate of climb
Fuel consumption
Takeoff CAR runway
Landing CAR runway

(Full first-class payload and normal reserves)
(Sea level, normal power, takeoff weight)
(30,000 feet, average cruise power)
(Sea level standard conditions; 1,750-mile trip)
(Sea level standard conditions; 1,750-mile trip)

Intercontinental 880
Basic 880
615 mph
3450 statute miles
40,000 feet
3700 fpm
1700 gal./hr.
5200 feet
5300 feet

600
615
4210
40,000
3140
1700
5500
4930

Capacities

Passengers
Payload
Fuel
Oil
Cargo capacity

880
(Coach version 110)
(Coach version 26,780 pounds)

600
(Coach version 121)
(Coach version 29,245 pounds)

88
88
23,150 pounds
10,770 gallons
28 gallons
863 cubic feet

96
25,120
15,110
28
928

Dimensions

Overall wing span
Wing area
Overall length
Height over tail

120 feet
2000 square feet
129 feet, 4 inches
36 feet, 4 inches

120
2250
139 ft., 5 in.
39 ft., 6 in.

Weights

Maximum landing gross weight
Maximum takeoff gross weight
Maximum ramp weight
Maximum zero fuel weight

132,800 pounds
184,500 pounds
185,000 pounds
117,000 pounds

155,000
203,400
204,000
126,000

Engines

880

Four General Electric CJ-805-3 jet engines, equipped with silencers and thrust reversers.

600

Four General Electric CJ-805-21 aft-fan jet engines equipped with thrust reversers.

Seats For 880 Club Compartment Will be Built by Chance Vought

A contract to build the club compartment seats for the first Convair 880s has been awarded Chance Vought Aircraft, Inc., of Dallas, Texas.

The order, which totals more than \$300,000, includes seats for the first 40 planes, 10 for Delta Air Lines and 30 for TWA. Each club compartment contains 12 seats.

The seats, of reinforced fiber glass, are made of an inner and outer shell filled with foam plastic for extra rigidity and strength. They will be of a con-

toured design to complement the modern fittings of the Convair jet transport.

Basic color is snowshoe white with upholstery to be of the color scheme of each airline.

First class passenger seats for the large passenger compartments are being built by National Seating Co., Mansfield, Ohio.

Club compartment seats for plane No. 4, first plane to be fitted with seats, were due in San Diego some time this month. First passenger seats for the plane will arrive this summer.



PANELIST—R. C. Sebold, Convair vice president-engineering (center), was among experts quizzed this month at a "Meet Aviation Press" panel in New York City. General topic was "supersonic transport." Sebold said he was confident that "when we can finance a supersonic transport, we can build it."

AF Team Briefed On Cargo Version

Proposed cargo version of the Convair 600 jet transport was under consideration by a team of Air Force officers at Convair San Diego Plant 1 last week (April 23-25).

Heading the group of 28 AF men were Col. K. S. Wilson of ARDC Detachment 1 of Wright-Patterson AFB, Dayton, Ohio, chairman; and co-chairmen, Lt. Col. W. A. Harmon of the transport weapon system project office at Wright-Patterson and Col. H. C. Wilder from MATS Hdqtrs, Scott AFB.

Presentation was under the direction of D. H. Digges, in charge of the Convair jet transport program, and H. J. Richardson, chief of AF requirements, SD military relations.

Private Pilot Dies in Crash

Killed in a plane crash in Mexico April 11 was a Convair Fort Worth man who was serving as a private plane pilot on a weekend religious mission to Central Mexico.

He was Frederick M. Weaver, 34, an electronics technician in Dept. 93.

Also killed in the crash was his passenger, the Rev. Harvey E. Flowers, pastor of Revival Temple in Fort Worth.

Weaver was flying a Stinson through rain and fog and trying to follow the Laredo-Monterrey highway when the craft crashed into a mountain 40 miles north of Monterrey, Mexico.

Weaver is survived by his wife; a daughter, Linda Weaver, 15; and his parents.

Three Types of Jet Transports Slated For San Diego Mfg.

Slated as follow-ons to Convair SD's first jet transports now in production are sister ships, the Convair 600 and the intercontinental 880.

The intercontinental 880, which is due to go into airline service the fall of next year, is designed for a longer range than the basic 880 now undergoing flight testing. The structure has been modified to allow for a higher payload with the maximum takeoff gross weight to be approximately 20,000 pounds more than the basic 880. Design calls for minor structural changes to the wing. Fuel capacity will be increased to 13,870 gallons making possible such routes as from Brussels to Leopoldville in Belgian Congo

or New York to Copenhagen.

Both the intercontinental 880 and the 600 will be equipped with leading edge slats which will cut down the stalling speed to about 106 mph. Stall speed of the basic 880 is 113 mph. Cutting down the stalling speed will allow the transports to land in shorter distances, making possible use of shorter fields.

Airline companies which have already ordered the intercontinental 880 are Swissair and Scandinavian Airlines System, five planes; Transcontinental of Argentina, four; REAL-Aerovias of Brazil, four.

The basic 880 has been ordered by Trans World Air Lines, 30; Delta Air Lines, 10.

The intercontinental Convair 880 retains the basic 880's medium-range capability and economy and many features in common, including cruising speed of 615 miles an hour, faster than any of the other jet transports now being built. The Convair 600 will have a cruising speed of 635 mph.

Both 880s will be able to accommodate 110 passengers in the coach version, while the 600 will be able to carry 121 passengers in the coach version. In a first-class version the Convair 880 will carry 88 passengers in a four-across seating arrangement. Conversion to coach (five-across seating arrangement) can be made by an airline crew in four hours.

The Convair 880 is powered by four General Electric CJ-805-3 jet engines, commercial version of the military J-79 that powers the Convair B-58, advanced bomber now being built at Convair Fort Worth for the Air Force.

The 600 will be powered by four General Electric CJ-805-21 aft-fan jet engines equipped with thrust reversers.

The Convair jet airliners will have a first-line service life of from 10 to 20 years. Their speed and medium-range capability makes unlikely the possibility of their being succeeded by any other subsonic aircraft. And with the high cost of supersonic aircraft development, it is highly improbable, say aircraft officials, that they will be ready for commercial use within the next ten years.

DR. JAMES RYAN OF ASTRONAUTICS MEDICAL FELLOW

Election of Dr. James Ryan, Astronautics chief physician, as a fellow of the Industrial Medical Association has been announced.

Dr. Ryan was to receive his fellowship certificate today (April 29) at the annual meeting of the association at the Hotel Sherman, Chicago.

In announcing Dr. Ryan's election, Dr. H. W. Dr. James Ryan Lawrence, association president, specified the honor was being bestowed as "recognition for outstanding work in the field of industrial medicine."

A graduate of St. Louis University School of Medicine (1940), Dr. Ryan has been with Convair since August, 1951, first as a staff physician at Convair San Diego, then as Astro's chief physician, beginning in September, 1956.

Astro Man Elected By Welding Society

Robert L. Hawkins, Astronautics factory process engineer (Dept. 758), has been elected first president of the San Diego Section, American Welding Society, Inc.

The recently-organized group has a charter membership of 89 persons interested in promoting the art and science of welding. One of the aims of the group will be to emphasize youth education.

General Office Badges Changed

General Offices salaried personnel were wearing new badges this month.

They are a white field with blue stripes slanted across the upper half. The lower half of the plate, plain white, carries the individual's name and title or group designation.

Staff executives (defined as those reporting directly to General Offices executives) continue to wear badges with a blue field marked by a horizontal red stripe.

Both types of badges entitle the holders to full entrance privilege to all Convair-owned and Convair-operated property, subject to local security regulations.



"... and if you get thirsty during the night, just turn this."



Published every other Wednesday.



Convair Division of
General Dynamics Corporation.

Convairity

Vol. 12, No. 12

Wednesday, June 10, 1959

SAN DIEGO, POMONA, ANTELOPE VALLEY, VANDENBERG AFB, CALIF.

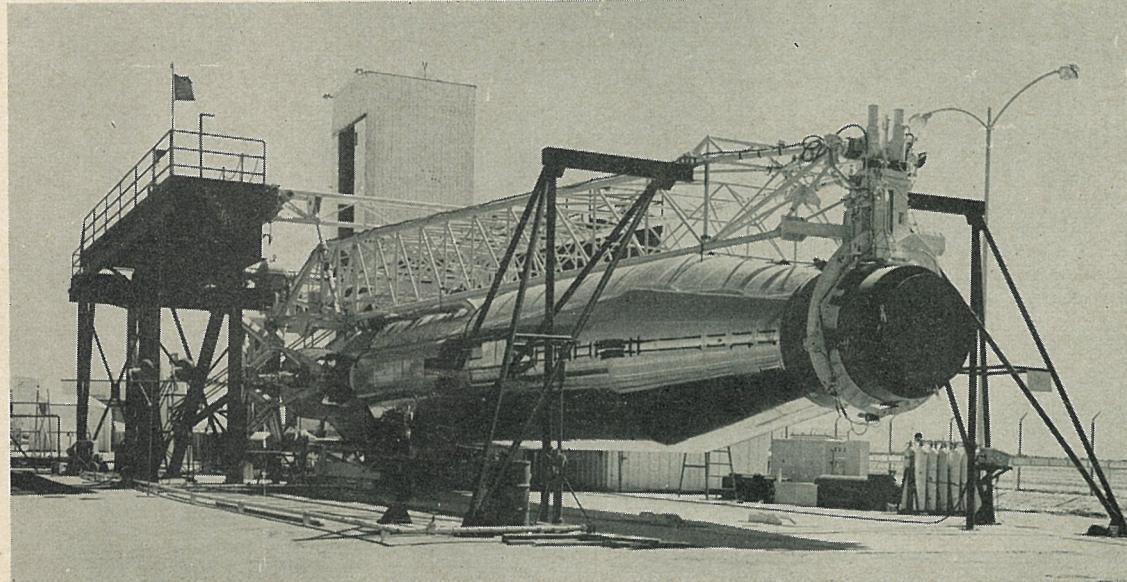
Astronautics

EDITION

Serving Astronautics' San Diego plant and facilities at AFMTC, Fla., and Vandenberg AFB, Calif.

Astro news office, Kearny Mesa plant, ext. 1154. Vandenberg news contact, ext. 8-4148. AFMTC news contact, ext. 3038.

AFMTC, CAPE CANAVERAL, FLA., FORT WORTH, TEX.



ERECTOR-LAUNCHER—New mechanism for raising Atlas missile to launch position will be installed at first operational Atlas base, Warren AFB, near Cheyenne, Wyo. This photo of missile and gear was taken at Sycamore Canyon, Astronautics facility near San Diego. For more photos on erector gear and description of Warren AFB, see page 8.

Leading Math Students Paid Tribute at Dinner

Convair Astronautics paid tribute late last month to 75 top mathematics students in San Diego County, their principals and instructors of honors mathematics classes.

Occasion was a banquet held in the Astronautics executive dining room to present awards for a county-wide mathematics contest. J. R. Dempsey, Astronautics manager, and K. J. Bossart, Astro technical director, presented the awards. Dr. William H. Pickering, director of the California Institute of Technology Jet Propulsion Laboratory, was the speaker.

Three students received individual awards for top scores in each of three major divisions in

the contest. They were Richard P. McGehee, Hiroshi Iguchi and Robert P. Johnson. Each received \$100 in cash and a slide rule.

Team competition among the 25 participating schools found Crawford High School topping San Diego City schools; Mt. Miguel High School, best of the county schools; and St. Augustine High School, best of the independents. Each received trophies.

In addition, the student from each school with the highest score in the test received a slide rule, while the next two high scorers of each school received certificates.

Tests used were prepared and scored by the mathematics department of San Diego State College.

Full 'Crew' Expected For June 27 At 'Shipwreck' Dancing Party

Early ticket sales indicate a full "crew" will be on hand June 27 when the M.V. Marietta sails for an evening of fun on San Diego Bay.

Occasion is a "Shipwreck" dancing party under the sponsorship of CRA's women's activities. Boarding is at 6:30, departure at 7 p.m. The excursion cruiser, which will be specially rigged for dancing, will return to the dock at 11 p.m.

In the interim, dancing and other activities will be enjoyed. CRA plans prizes for the best

costumes depicting the shipwreck theme. Any costume is in order.

Full price for the affair is \$1.50 per person, which includes a smorgasbord buffet. Refreshments will be available.

Passenger capacity of the M.V. Marietta is 350. For that reason, only 350 tickets are to be sold. The first day they were offered, Astro employees grabbed 50. Subsequent sales have been high, indicating an early sell out.

These tickets are available through employee services outlets.



HELMSEN GALORE—Astro Wives visited "M.V. Marietta," excursion boat, recently to complete plans for June 27 Shipwreck Party. That's "Captain" Diane Bing at helm with Jackie Gauthier, Marlene Parisa, Rusty Walker, Sara Reid, Billie Lau and Mary Runkle. Limited number of tickets are now available through employee services outlets.

Dempsey Key ARS Speaker At Luncheon

Convair Astronautics men and women are taking an active part in the current American Rocket Society semi-annual meeting and astronautical exposition now in progress in San Diego.

Some 2,000 military and civilian missile scientists, the largest number ever assembled at once for a meeting, are participating in the five-day sessions which opened June 8.

One of the key attractions offered those attending is an opportunity to visit Astronautics' new plant for a tour and briefing. Tours, offered twice daily through tomorrow (June 11), include a movie and a visit through Astro's engineering operations and test laboratories.

J. R. Dempsey, Astronautics manager, was the key speaker at a luncheon held today (June 10). Kraft Ehrcke, Astro's Centaur director, is slated to speak at a banquet tonight.

Dr. John Naugle, staff scientist of Convair's scientific research office, is local chairman for the meeting.

Speaking at a banquet last night was Dr. C. L. Critchfield, Convair director of scientific research.

Europe Tour Meet June 15

Enthusiastic would-be European vacationists are beating the bushes at Convair Astronautics for potential travelers to make possible a planned CRA-sponsored trip this summer.

Charter requirements specify 79 must sign up to make the trip. About half of this number is ready to go.

For those who would like additional details, a 7:30 p.m. meeting is slated for June 15 at the Astro executive dining room.

Departure would be Aug. 22, returning two weeks later. An all-expense package trip is \$629 per person, while round-trip air fare is only \$449 per person. The package deal includes hotel rooms, fares, travel, two meals per day, etc.

The tour would include time in London, Amsterdam, Brussels, Cologne, Wiesbaden, Luxembourg, Chalons-Sur-Marne and Paris.

A brochure explaining the entire program has been prepared by CRA. Copies are available through employee services, Bldg. 8.

Hospital Fund Drive Meets Early Success

Early returns in the Tri-Hospital Building Fund drive at Convair Astronautics show that well over half of those returning their cards so far have pledged support.

A definite trend was established late last week when 60 of the key campaign workers in the drive gathered for an initial report meeting.

On hand were representatives of the International Association of Machinists, Engineers and Architects Association, International Brotherhood of Electrical Workers, United Welders of America, Convair supervision and other key employees who have shouldered the bulk of the work load involved in the drive.

There are 19 major reporting departments or functions involved. Each unit presented a brief report stating progress made, work yet to be done and some indication of pledges made to date. A few of the smaller units revealed 100 per cent participation already. Some of the larger groups reported many contacts were yet to be made.

The Tri-Hospital Fund drive at Astro is part of a county-wide move to raise \$10½ million to improve and enlarge three major hospitals, Scripps, Mercy and Sharp.

Astro employees in the San Diego area are being asked to pledge one day's pay each year for the next three years for this purpose. Similar requests are being made of all San Diegans.

Astro mapped out its drive to extend over a three-day period, beginning June 1. However, campaign workers will continue to make their rounds to reach those returning from leave or vacation. Employees merely sign tab cards which authorize payroll deductions in regular amounts which total a day's pay.

Teams (an average of one team for every 20 employees) have worked through Astro's on and off-site installations. For the most part, the teams have included one union member plus a second campaign worker, usually a supervisor.

Although the drive was set up and administered as a single operation, various groups conducted the work involved in their own fashion. For instance, (Continued on Page 6)

Management Club Elects Dick Campbell

R. S. (Dick) Campbell, chief of test labs, will head a new slate of Astronautics Management Club officers to be installed June 17 at a Lafayette Hotel meeting.

Others include: D. P. Wright (Dept. 521), first vice president; D. F. Folland (Dept. 551), second vice president; Ernie Wade (Dept. 556), recording secretary; J. J. Janda (Dept. 191), financial secretary; and L. I. Medlock (Dept. 342), treasurer. One-year board of control members included: Ray Clever (110), Sam Ackerman (510-2), Paul Lewellen (756), Frank Budz (772) and D. R. Collins (541-1).

Dick Campbell
Featured speaker at the tooling department-sponsored affair will be John M. Wilson, author and retired vice president of the National Cash Register Co. He will discuss "Motivating People."

Also appearing will be the winners of the club's first annual scholarship program and the club's selection as missileman-of-the-month.

This will be the final meeting of the summer. The club will suspend activities until September following this meeting.

Convair to Observe July 3 as Holiday

Inasmuch as July 4 falls on a Saturday this year, the preceding day, Friday July 3, will be observed as a holiday at all Convair divisions and facilities.



FIRST RETURNS—Conducting Tri-Hospital Fund drive at Astro has fallen to many groups, all equally important. Checking early tab card returns are these representatives, from left, M. A. Kittelson (IBEW), Dean McCoy (supervision), R. E. Beary (EAA) and Peggy Collier (IAM).



DESTINATION, PLEASE—Travel reservations, full-time job for three Astro employees, are expected to increase with more off-site bases. W. L. "Bill" Prunty and Jo Justis handle well over 1,300 per month. Third member is messenger.

Astro Fast Becoming 'Travelingest' Division

If current trends prevail—and there is little reason to doubt they will—better than 10 per cent of Astronautics' San Diego work force will make a trip during the coming month.

That's the average reported by Astro's unique travel reservations service operated by material department's traffic section.

Unlike most Convair divisions, which have separate offices for commercial and bailed (special aircraft operated as combination cargo-passenger carriers) travel, Astro's reservationists handle both.

Commercial travel alone over the past year has involved literally millions of air miles. And As-

tro men and women have utilized bailed aircraft almost as much as commercial.

For instance, the last full month for which figures are available found Astro reservationists sending out: 736 commercial travelers; 435 going to Vandenberg AFB and 417 returning; 30 going to the Missile Static Test Site, Edwards AFB, and 39 returning; and upwards of 100 going each way to and from Patrick AFB, Fla.

A call to the travel reservations desk sets a chain of activities into motion. In addition to securing the necessary reservations, issuing an order for the ticket which is picked up and delivered, personnel also send out requests for lodging and handle confirmations for the traveler.

For bailed aircraft a travel manifest must be prepared and the Florida flight requires special travel authorization for each person involved.

Mrs. Josephine (Jo) Justis has been an Astro reservationist for almost three years. She was hired for this purpose after working 10 years for two airlines in reservations. W. L. "Bill" Prunty has been with Astro since last November after 16 years in travel service. A. R. Reed handles pickup and delivery of tickets.

Club to Sponsor June Workshop

A special "Workshop on Increasing Productivity" will be held June 26 and 27 at Convair Astronautics under the sponsorship of the Astro Management Club.

The club is picking up the tab on the sessions with the exception of a dinner to be held at 5 p.m. June 25 at the Astro cafeteria. Members will pay \$1.50 for this. First sessions will begin at 6 p.m. following dinner.

Additional sessions will begin at 8:30 a.m. June 27 and run through noon.

Max Skousen, nationally known management development specialist, will conduct the workshop.

Registration information has been forwarded to all members. Those who did not receive notices may contact educational services office (Tom Norden, ext. 1471) for information.

Customer Post Goes to Bailey

Henry M. Bailey has been named general supervisor of customer training in the Convair Astronautics support engineering department, according to E. T. Clare, support services manager.

In his new job Bailey will be responsible for individual training, integrated weapon system training, training design and training documentation on the customer level. He reports to R. F. Nelson, chief of support engineering.

Bailey joined Convair San Diego in 1954 as a design specialist in the engineering electronics laboratory. He moved to Astronautics in 1957 in the same capacity and became an assistant project engineer in 1958.

Vandenberg AFB Wives Organize

Convair Vandenberg Wives Club reports a tremendous response to organizational activities held recently.

Sixty-three wives were on hand May 27 for a luncheon at Rick's Rancho, Santa Maria. Those gathered elected a slate of officers presented by the nominating committee.

Mayelle Stahl was named president; Dolores Donnelly, social vice president; Patricia Harbin, publicity vice president; Loyce Hawkinson, secretary; and Bonnie Thompson, treasurer.

Plans call for monthly meetings as well as the sponsorship of other activities. All Convair wives in the area are invited.

Ernie Galbos Named Warren News Contact

E. J. (Ernie) Galbos of industrial relations has been appointed news contact for Convairity at Warren Air Force Base.

Any tips on possible feature stories, news items, sports and recreation events, etc. may be relayed to him at Bldg. 832, ext. 5255, for transmittal.

Base activation is a product support task under C. F. McCabe, base activation manager. Engineering has overall surveillance responsibilities. Kerry Coughlin, assistant project engineer, operations engineering, is the immediate supervisor. Actual construction work coordination and surveillance fall to plant engineering and is under the direction of W. J. Connolly, construction coordinator, with support from design

Astro Teams Form Vanguard As New Atlas Bases Activated

Convair Astronautics has a growing number of modern-day "pioneers" either on duty or ready for duty at every Air Force base slated to receive launching facilities for the Atlas missile.

These men are vanguards to hundreds of Astro men and women to be assigned to these bases for activation chores (Convairity, May 13, 1959).

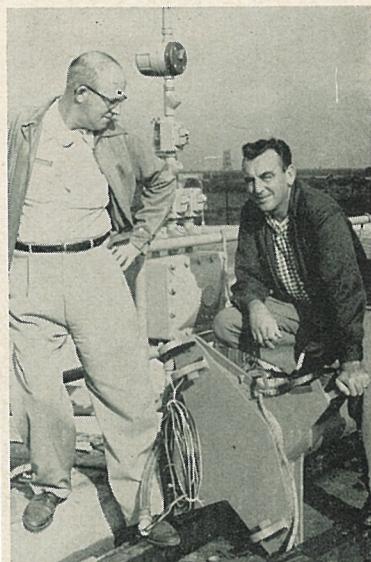
Initially, plant engineering and operations engineering assign a single resident representative each to the base. Their duties begin, in most cases, with the start of construction. As work increases, personnel are assigned to assist them.

Convair refers to their work as surveillance. Building tradesmen jokingly refer to them as "watch dogs."

Coordinating their efforts closely with the U.S. Army Corps of Engineers, government contracting agency, they keep a weather eye on the installation of all buildings and equipment related to the Atlas program. Guided by plans worked out by Astro and the Air Force, they apply a tell-tale "tape" to every project. Each new addition finds them on hand to see that it meets specifications. To them falls the task of coordinating changes and modifications over original drawings. Their job extends from the pouring of footings right through activation of the site.

"The Air Force has asked us to oversee the installation of fully operational facilities," said W. J. Stanley, chief plant engineer. "In a way we are the middle man, 'buying' from the contractors, 'selling' to the Air Force."

Base activation is a product support task under C. F. McCabe, base activation manager. Engineering has overall surveillance responsibilities. Kerry Coughlin, assistant project engineer, operations engineering, is the immediate supervisor. Actual construction work coordination and surveillance fall to plant engineering and is under the direction of W. J. Connolly, construction coordinator, with support from design



HOT AND COLD—Typical of Astro men who precede Atlas base activation are: (top) W. J. Connolly, left, and John V. Stuhl, looking over installation in Florida; (below) Bob Morrell and Ray Tipton, shown at Warren AFB where weather was in marked contrast to Florida. It was zero that day!

and project control sections of plant engineering at the Astro plant.

This phase of the Atlas program—base activation—is bringing various groups into the picture for the first time. On the other hand, construction coordination is now "old stuff" to plant engineering.

From early 1955 through the first quarter of 1959, Astro's plant engineering department has coordinated contracts for construction totaling about \$80 million. The initial quarter of 1959 shows some \$8 million having been committed.

Plant engineering's work dates back to the days when Astro people were a part of San Diego Division. It includes all test facilities now in use in the San Diego area, the Astronautics plant, plus hundreds of different projects and facilities across the nation.

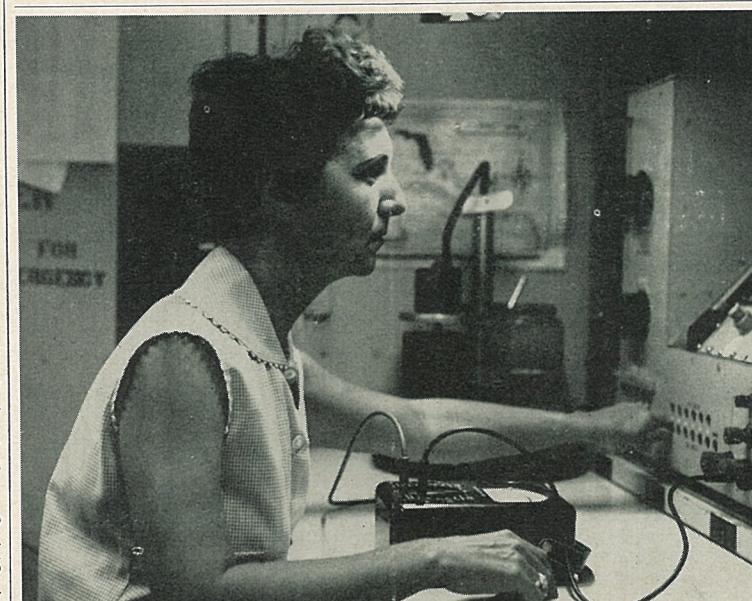
Being advance man on these projects is not always a bed of roses. Connolly and his men tell of setting up offices in their cars, of surviving cold and heat and often encountering wild animals. (Atlas facilities are installed in remote areas.)

Rick Richards, now at the Astro plant, once logged 53,000 miles of driving in 13 months while serving as resident engineer at the Missile Static Test Site, Edwards Air Force Base.

Convair Daughter, 17, Voted Beauty Queen

Robin Cowell, 17, daughter of Astro's LaVere Cowell of Dept. 120, has been named "Miss Angel" in a beauty contest staged at Ream Field by U.S. Navy units stationed there.

Robin, a junior at Mar Vista high school, was selected from a field of 30 contestants.



JUST CHECKING—Doris Carlson, lone calibration technician among Astro employees at AFMTC, uses meter test set. Mrs. Carlson once assisted in rectifying troubles on ready-to-fire missile during final minutes of countdown.

Doris Carlson Lone Woman Among AFMTC Calibration Technicians

Surgeon-like skill with delicate instruments, plus steady nerves in emergencies, has earned admiration from far and wide for a Convair Astronautics technician at the Air Force Missile Test Center, Florida.

She is Doris Carlson, calibration technician "A," the only one of her sex at the Florida facility.

As one of the regular members of a calibration trailer crew at AFMTC, Mrs. Carlson devotes most of her time to servicing, repairing and overhauling meters and fine precision instruments.

She handles many of the calibration chores among the estimated 1,000 items used in testing the Atlas missile in Florida.

However, one act, performed during the final minutes of a

countdown for a firing, stands out.

During this period difficulties occurred in the missile power circuitry. A hold was called and Mrs. Carlson promptly joined an escort to approach the almost-ready-to-fire Atlas. Working deftly and surely, she and her companion found and righted the trouble. Unknown to her at the time was the fact all blockhouse television cameras had been focused on her.

Mrs. Carlson worked for General Electric for over three years, first assembling meters, then calibrating and repairing them. She came to Convair in 1956 as an engineering standards laboratory employee. She transferred to AFMTC in April, 1957.

Convairity

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations. General Offices, San Diego, Calif., Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

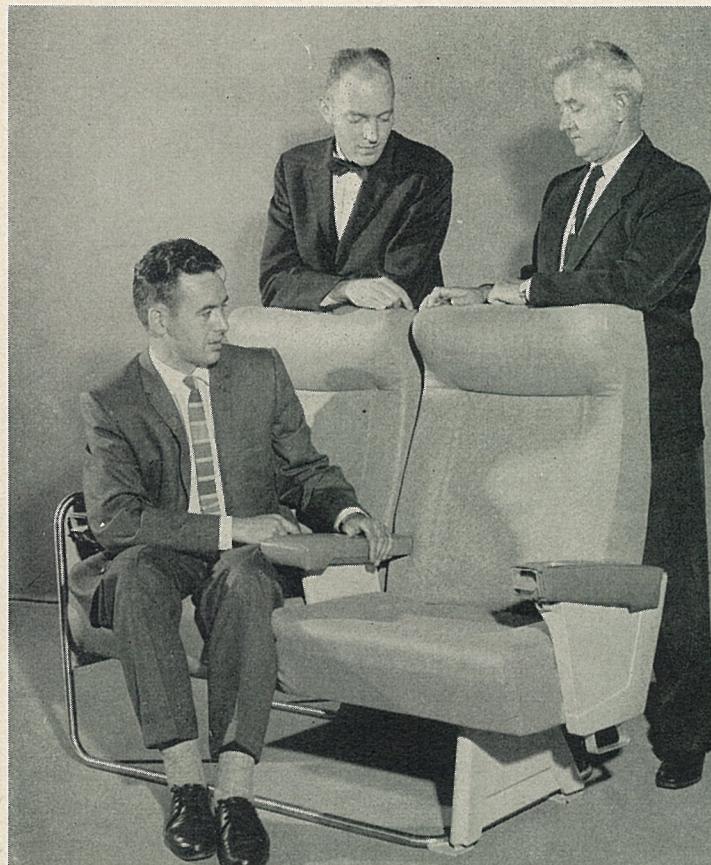
SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Grace Fath, Helen Pemberton, Fred Bettenger.

Astronautics Editorial Offices, Bldg. 2, new plant, ext. 1154. Staff: Bryan Weickersheimer, news editor.

FW Editorial Offices, Col. 73C, ext. 2961. Mailing address: Convairity, Convair, Fort Worth, Texas. Telephone PErishing 8-7311. Staff: Bob Vollmer, news editor; H. A. "Pat" Baker Jr., Mary Beck.

Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Offices, Room 31, Bldg. 301B, Palmdale, ext. 337. Staff: Betty Lou Nash.



DESIGNERS—Experts working on interior design of Convair's jet transports, from left, Charles Willits (seated), James Stansfield, and Cliff Dietz of Convair SD furnishings, examine upholstery chosen by one 880 transport customer.

Ex-Auto Designers Join In Creating Jet Interior

A group of industrial designers transplanted from the automotive industry in the Midwest have added their talents and know-how on interior appointments to those of other Convair designers to create jet transport interiors.

Approximately 35 years' experience in automotive styling and industrial design were piled up by four men before they came to Convair San Diego as a part of the furnishings section of engineering.

Coming from Chrysler was James Stansfield; Dave Maslan from General Motors; Joe McMahon, from Ford Motors Co.; and Ralph Meyers, from Studebaker.

They joined a design group headed by Cliff Dietz who came to San Diego in 1947 as a styling follow-up man. Others now working on interiors for the 880, 600, and intercontinental 880 jet transports are Charles Willits, Bruce Swinford, Will Warriner, Harry Malcolm, and Claire Lynch.

All of the group have either an industrial design, art, or architectural background.

The main difference between interior appointments for automobiles and aircraft is the difference between assembly line, quantity work and custom-made jobs, explained Stansfield. In the automotive industry there is little variance in the interior styling of the different cars and the materials can be purchased in quantity lots, while in the aircraft industry each customer has the privilege of choosing his own appearance design, colors, and fabrics.

For instance, the different airlines have different needs which affect the interior design of the planes. Those lines which will

use the transports for short hops only need a buffet equipped to handle pre-cooked food, while planes designed for long trips will need buffets outfitted for cooking on the plane. Various types of seats are being specified, such as the "siesta" seat, a large reclining type—all making a great variance in the interior styling.

Each customer is allowed to choose its own color scheme, fabrics, and general decor.

Weight, availability over a span of time for replacement, fire resistance, and durability must all be considered in the choice of materials. Upholstery and carpet fabrics must be custom woven for color and weave.

Special processes have been worked out by the interior design group to provide a particular type of decoration such as the mural scenes which will highlight the vertical partitions in the lounge and cabin of TWA 880s. The art work was executed by Warriner and reproduced in silk screen on the back of a sheet of vinyl which in turn was laminated over a vinyl backing with a sheet of fabric as center layer.

The industrial designers meet a variety of engineering problems—plumbing, sliding pods, movable coat closets used as dividers—all unique to the aircraft business and which, at least up to now, have not entered the field of automobile design.

Dr. Bond Addresses NATO Advice Group

Dr. John Bond Jr., Convair SD chief of physics, is in Paris this week to address the NATO advisory group for aeronautical research and development.

'Convair, California' Card Reaches MST

The mail goes through, even when the address is vague and incomplete.

A card, addressed "Convair Aircraft Corp., Missile Division, General Delivery, Calif.", reached the MST facility just four days after it was mailed from West Lebanon, Ind. It was written by a Boy Scout, Bob Powell, requesting pictures of the Atlas missile.

Restored B-24 Takes Its Place In AF Museum

A B-24, restored to wartime spit and polish, flew to Wright-Patterson AFB at Dayton last month to enter the Air Force Museum.

Its arrival was a high point of Armed Forces Day observance before a crowd of 62,000 May 17.

A. C. Snyder and C. K. Kurtz, Convair SD field service engineers at Dayton, reported:

"The airplane really created quite a sensation and there was a terrific surge of the crowd to the fence as the airplane taxied to the park . . . It was a real thrill to see the old B-24 . . . It had four of the sweetest, smoothest running engines you ever heard and it was rather sad to hear them shut down and watch the big 'fans' come to rest for the last time."

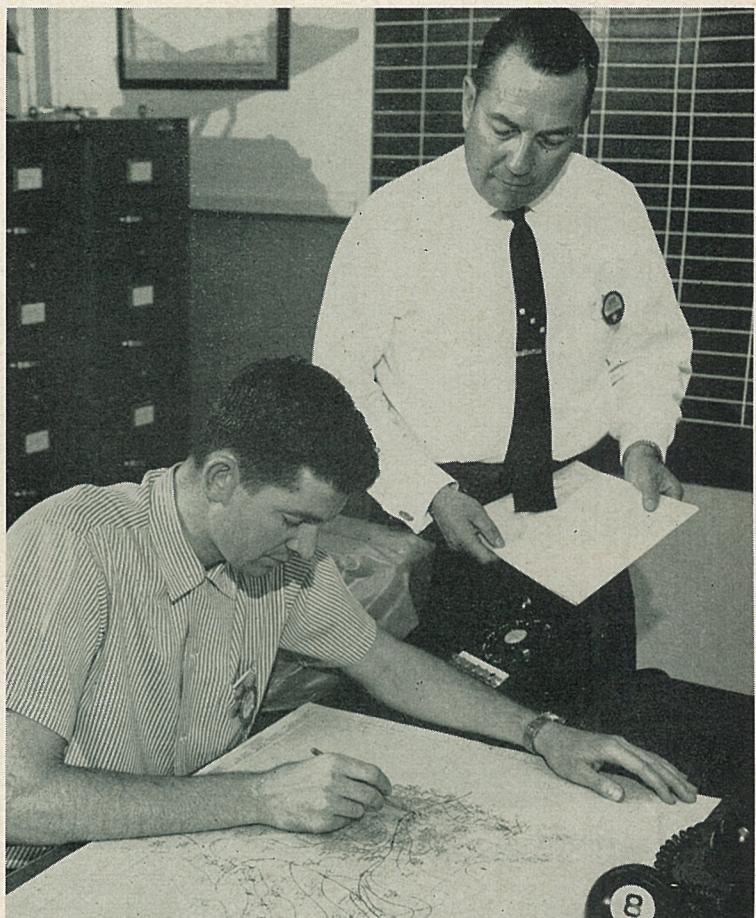
Although billed as the "last flying B-24," actually there are quite a number of the Convair-built wartime bombers flying in various parts of the globe, though virtually all have been modified for cargo or executive purposes.

A Dayton Daily News columnist, James E. Fain, was responsible for adding a nostalgic twist to the affair. In a somewhat uncomplimentary column commenting on the "last of the B-24s" he wrote: "The Liberator was anything but an affectionate airplane . . . There weren't many things you actually could blame on the Baker-Two-Four, if you wanted to be fair . . . It was just unsympathetic . . . the kind of mechanism that would go on forever, unending and unyielding . . . Like the dinosaur, the B-24 never was much of a pet, anyhow."

In response, James R. Longenecker, captain, USAFR, wrote the editor:

"In flying 26 combat missions with the Eighth Air Force, I personally developed a great love and affection for (the B-24). Granted that it did not have the stability of the B-17, yet the airfoil which it had for wings was aerodynamically superior to anything of its time. I personally do not recall any serious gripes about the handling of this airplane . . . I mourn its passing very much and would give anything for just one more ride . . . May its soul rest in peace."

Captain Longenecker's letter was read with interest by Maj. Robert L. Bryant, AF museum director, who was instrumental in recalling the captain to active duty, long enough to grant his wish for "one more ride."



PREDICTING—Tom Johnson and Paul LaFrenier of Convair Palmdale are continually "behind the 8-ball" at weather bureau that predicts weather for F-102s and F-106s prior to cross-country flights.

Palmdale Weathermen Outguess Desert Winds

In Antelope Valley, where sudden desert winds can play havoc with aircraft on the ground and in the air, weather forecasting is important business.

So Convair Palmdale's flight department maintains its own weather bureau manned by departmental assistants Tom Johnson and Paul LaFrenier.

Surface weather information reported from nearly 300 stations throughout the United States is transmitted via teletype to the Palmdale facility once each hour. From this information Johnson makes a daily analysis.

Of primary concern at Palmdale are conditions between Palmdale and Kansas City, and Palmdale and Spokane, routes followed on ferry flights of F-102s and F-106s to Richards-Gebaur and Geiger Air Force Bases. Before these jets can take off visibility must be five miles or better and ceiling must be 5,000 feet or better along the flight route. Johnson and LaFrenier give all pilots a weather briefing before take-off.

Similar service is provided for the many other out-bound and in-bound flights from the Convair Palmdale facility, a station which rates in flight activity with major airline stations.

A major accomplishment of Johnson was his formulation of a new system of forecasting Antelope Valley winds, a system so reliable that it has been adopted at nearby Edwards Air Force Base. Using an elaborate algebraic formula involving temperatures, surface pressures and other data, Johnson devised an accurate way of forecasting maximum wind expected for the next six-hour period.

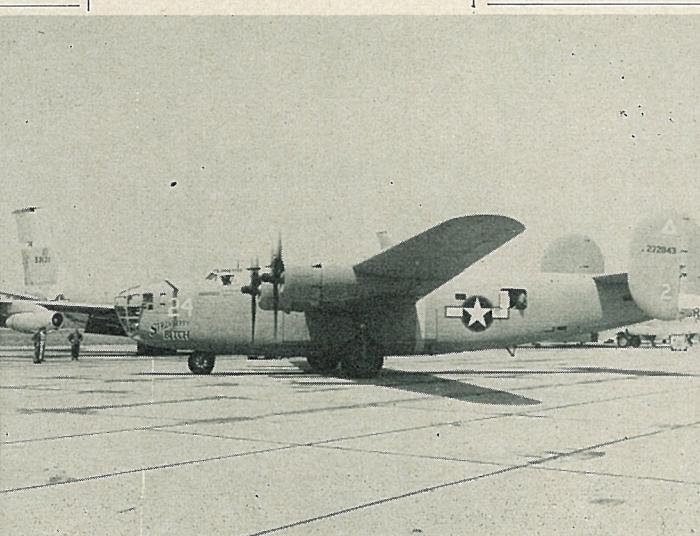
This information is vitally important because it gives advance warning and enables crews to secure all ground aircraft and to cancel scheduled flights to avoid possible damage. It is significant that Convair has never experienced any loss at the Palmdale facility due to surprise winds.

Palmdale's flight department is manned at all times that flights are in operation by either Johnson or LaFrenier. Johnson joined Convair in January of 1956 in his present post. Prior to that he was chief flight superintendent at Los Angeles Airways, where he gained much of his weather experience.

LaFrenier joined Convair in November of 1950 in the San Diego production flight department where he planned overseas deliveries of 240s and 340s. He came to Palmdale in November of 1955 when Rex Warden took over as chief pilot, the position now held by R. E. Myrann.

LaFrenier has a wealth of fascinating background experience ranging from deep sea fishing to both military and civilian air service. One of his most interesting wartime stints was as a member of the 10 hand-picked crews on "Project 7-A." Their assignment was to bridge the Burma Road by air in support of Chiang Kai-shek and Chenault. Using Convair-built C-87 cargo transports, they flew night and day through monsoons and all types of weather to deliver gasoline and ammunition.

LaFrenier is presently active with AV Soaring Association, serving as director and helping to provide air education for Antelope Valley youth.



"LAST OF LIBERATORS"—B-24, restored at Davis-Monthan AFB, Ariz., last fall, was flown to Wright-Patterson AFB at Dayton last month to enter Air Force Museum there. Arrival was part of Armed Forces Day show. At left above it is shown before

restoration. Center is arrival at Dayton. At right is delivery ceremony, from left: T/Sgt. Albert Jones, AF Reserve Capt. J. R. Longenecker, Maj. Max Hadley, Col. A. J. Shower, Maj. Robert L. Bryant, museum director.



RESCUE WORK—Art Thomas (Convair SD Dept. 25) tests two way radio in jeep (at right) and discusses search area with executive officer Darrell McMaster on left. Thomas is commander of ground rescue unit of San Diego Civil Air Patrol, a group which has played prominent role in rescue of downed aviators and lost persons in mountainous area bordering San Diego county.

Seeking a 'Strike'

It's Rough and Tough Traveling, But Ground Searchers Like It!

Treacherous mountains in rattlesnake country, often through mud and dense underbrush, are all in the day's—or night's—work for a small band of San Diego men who gladly face the dangers to save a life.

Led by Art Thomas (Dept. 25 Convair SD), commander, they are members of El Cajon Valley Squadron No. 97, the ground rescue unit of the San Diego Civil Air Patrol.

As such, they form one of the largest units of its kind in the country. Present membership numbers 15, each of whom takes a tough training course that includes advanced first aid, mountain climbing, investigation tactics, search procedure, and monthly familiarization problems in little-known areas in San Diego and outlying countries.

Officially formed as a squadron about one year ago, they have in the past eight months played prominent roles in the search for four downed flyers and a lost child. The most recent was helping in the rescue of an Astronautics man and his wife after their plane crashed a few weeks ago in the Santa Rosa Mountains.

All the men serve voluntarily and are members of the San Diego Ridgerunners, parent organization of the Convair SD CRA Jeep Club. They are on call at all times in an emergency, Thomas said, and have never dropped below 85 per cent participation when called into action.

When first word of an emergency reaches a member, chain

SD Auto Engineers To Visit Shipyard

The San Diego Section of the Society of Automotive Engineers will hold its June 15 meeting in conjunction with a tour of the National Steel Shipyard. The meeting will start at 5 p.m.

S.A.E. plant representatives, George Lemke, ext. 1605, and Clarence Gerber, ext. 2981, can provide additional information.

telephone reaction quickly follows and the group assembles at their headquarters at Gillespie Field. Awaiting them there are 12 jeeps, fully-packed for a three day expedition into the mountains. All are equipped with first-aid equipment, two-way radios, stretchers, blankets, etc.

A briefing session follows and in the case of a downed flyer the squadron starts at the last known point where the flyer was seen or if this information is not available, the presumed direction.

When the probable location is reached, the jeeps fan out and a fixed pattern of questions is asked of anyone that might possibly have seen or heard the plane.

When a "strike" is made, jeeps are driven as far as possible into the mountains or canyons, then members continue on foot. Thomas coordinates the operation by radio from the Gillespie Field headquarters. He also keeps in touch with planes and eventually personally joins the search.

"Many times we have yelled all night until our voices became whispers, swung spotlights back and forth, cut paths with bolo knives through dense underbrush, teetered in the black of night on a mountain side or hung from ropes extended into space over the side of a cliff," Thomas said.

"We never give up the search until the person is found or presumed dead."

Members are not paid for their services, in fact they buy and maintain the jeeps together with all the equipment. On occasion they may also lose a day's pay at their regular jobs.

"The feeling that you have helped somebody is our only compensation," Thomas asserts.

"Our ambition is to make the organization a complete rescue operation. To do it we need flyers and aircraft. Openings are also available as observers on the jeeps. But we are not kidding anyone, it's a tough job."



"If I wuz you, I wouldn't loan my end wrench to Bonelli any more . . . He makes such a fuss about having to return it!"



Wed 60 Years, FW Man Is 80

Convair Fort Worth's 80-year-old Dan Longley and his wife, Minnie, celebrated their diamond wedding anniversary recently after 60 years of married life.

"Just stay with it," the Dept. 81 veteran advised when asked the secret of the Longleys' "togetherness."

Longley, four years older than his wife, married in 1899.

The son of an oil man, Longley worked some 40 years in the drilling business before leaving Ohio for Texas in 1924. Mrs. Longley is a native Pennsylvanian.

When he came to Convair 16 years ago, he weighed about 150 pounds. Now he tips the scales at 106 but isn't complaining.



ANNIVERSARY—Convair Fort Worth's Dan Longley, 80, left, of Dept. 81 shows assistant foreman C. A. Little picture of his wife. They have been wed 60 years.

"I'm not much of a meat eater any more—just like the vegetables," he added.

A heavy smoker, Longley started on cigarettes and chewing tobacco at the age of 7. He said he couldn't remember being without one or the other but advised that "it'll kill you if you keep at it, you know."

When he's not taking care of his 15 great grandchildren, he's usually working in his carpenter shop where he specializes in cabinets.

VETERAN OF B-36s WINS 2,500-HR. PIN

Capt. James N. McDaniel at Malmstrom AF Base in Montana last week was awarded a 2,500-hour pin to recognize his hours of flight in B-36s. He previously had received a 1,000-hour pin.

"I felt at the time that the B-36 was just about the ultimate in a long range bombing platform. As a member of Maj. Thad Neal's crew, I flew farther and higher and longer than I had ever flown before—and on one flight had to shave three times before we landed! This was all without refueling, too."

Formula K Craze Hits Texas Where It's Called Go-Karting

Go-Kart champ Dennis Cannon of Convair Fort Worth's Dept. 15-3 says there's just 42,410 pounds difference between the weight of his 90-pound go-kart and the red fire truck he drives at the plant.

Cannon, recently proclaimed indoor go-kart champion of Texas with his 13.9 record set at Will Rogers Coliseum, has done pretty well for himself since he started go-kart racing only in February. (The tiny machines are known elsewhere as Formula K.)

"I've always been interested in racing," he said. "I competed in the Mexican Road Races in 1953-54."

The Convair fireman built his

own one-cylinder, two-cycle engine go-kart. He says maximum speed is approximately 40 mph and that he gets about 48 miles to the gallon with the mixture of oil and white gasoline.

Cannon says the tiny cars can be built for \$200 and up and that they're available on the retail market, too.

Joe Turner of Dept. 5-4 is another of Convair Fort Worth's go-kart racing enthusiasts. His car is a Spyder 500 model.

Both Cannon and Turner spend almost all of their Sunday afternoons at Mangham Airport where go-kart racing starts around 2 p.m. Both of their wives are qualified racers, too!



CHAMP GO-KARTER—New indoor "go-kart" champ of Texas is Dennis Cannon, left, of Convair Fort Worth's Dept. 15-3, shown here with Dept. 5-4's Joe Turner.

Years of Night School Pay Off as SD Man Passes Bar While Another Receives Degree

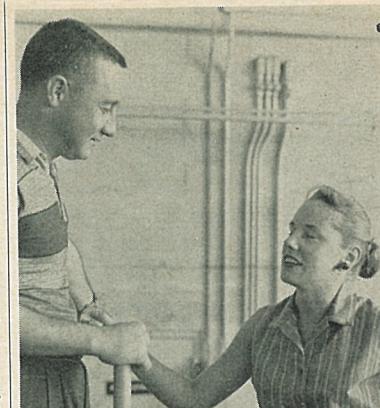
Two Convair SD men are seeing their labors recognized now after a total of nine years of night school study in two San Diego colleges.

Grueling though it was, both agree it was worth it.

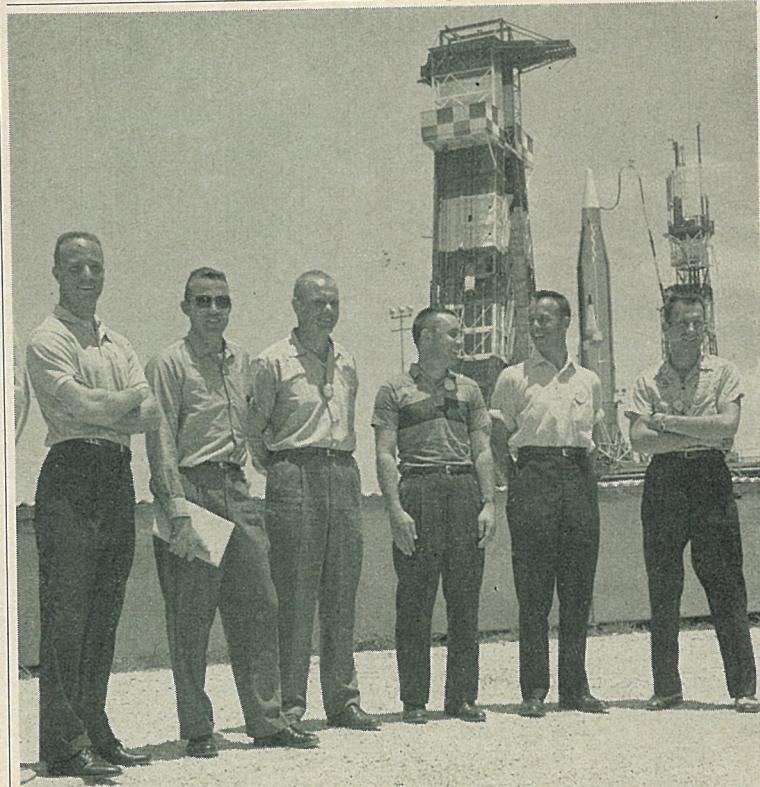
Timothy G. Evatt, a contract representative at Rose Canyon, was notified May 25 that he had passed the state bar examination. The notification climaxed four years of night law school at the University of San Diego, where Evatt was graduated in 1958. He received his B.A. degree from St. Michael's College in Winooski Park, Vt., in 1949.

Five years of night school at San Diego Junior College paid off for T. K. Fisher (Dept. 600) this month when he was graduated from the school with an Associate of Arts degree. Fisher is one of the first to receive this degree, which has only recently been offered by the college. It

is equivalent to 60 units or two full years of college.



REUNION—Mercury Astronaut Capt. Virgil Grissom found schoolmate when he visited AFMTC. He and Nancy Hamilton knew each other in Mitchell, Ind.

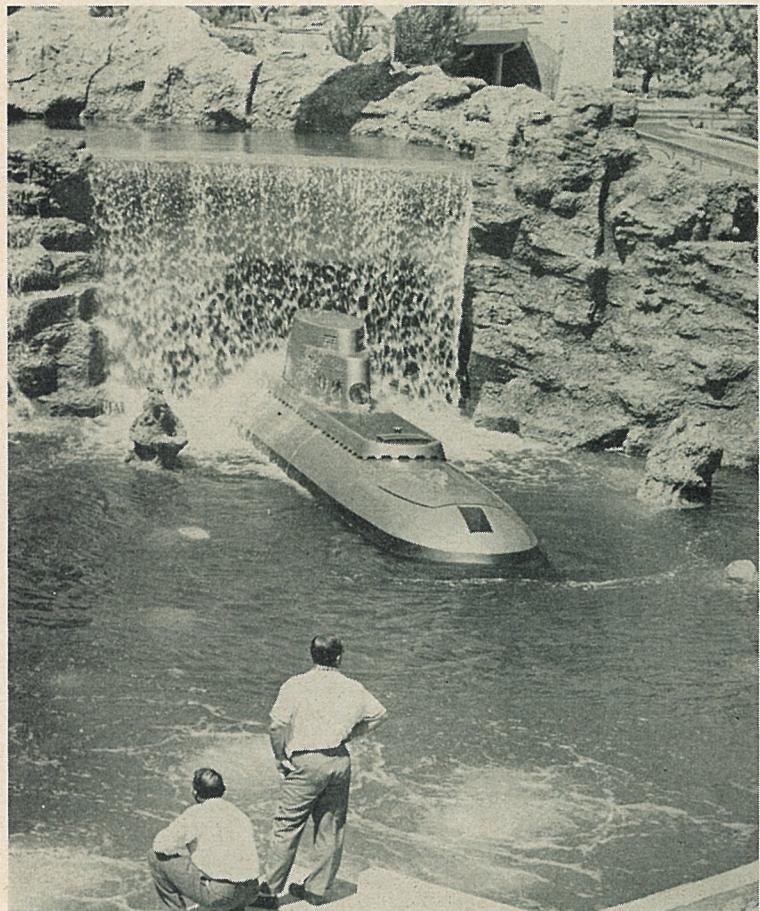


SIGHTSEEING—Mercury Astronauts, one of whom will be first man in space for free world, were recent visitors to Astronautics operations at AFMTC, Florida. In background is Atlas missile, destined to play important part in their venture into space.

NEWS FROM OTHER DIVISIONS OF GENERAL DYNAMICS CORP.

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair, Limited of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., aircraft, missiles and space systems.
Electric Boat of Groton, Conn., submarines.
Stromberg-Carlson, of Rochester, N. Y., telecommunications, electronic equipment.
Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.
General Atomic of San Diego, Calif., nuclear research, development, production.
Electro Dynamic of Bayonne, N. J., electric motors, generators.



DISNEYLAND SUB—Submarines (sponsored by General Dynamics Corporation) slated for Disneyland "ocean" at Anaheim, Calif., are undergoing "builders trials" and "shakedowns."

SSB (N) Washington Expected To Become Fleet Workhorse

GROTON—The nation's first "fleet ballistic missile" submarine, the George Washington, was launched here yesterday at Electric Boat.

Designated SSB(N)—the B stands for ballistic missile firing and the N for nuclear powered—the Washington will be capable of firing the 1,500-mile Polaris missile from either surface or submerged positions.

The Washington is expected to become a "fleet workhorse," constantly on station, and as such will have two crews. They will alternate between duty at sea and shore training.

The new submarine will be capable of staying at sea for long periods of time and will be able to manufacture its own oxygen supply for lengthy underwater cruises. The machine employs the principle of electrolysis—electric current running through a cell—to tear each oxygen atom from the two atoms of hydrogen in every molecule of water.

The sub's generator will turn

out enough to add 50 per cent more oxygen to the supply subs carry in storage bottles. Therefore the record 60-day submergence, completely independent of the atmosphere, which the atomic sub Seawolf set last year, could be surpassed with ease by the Washington.

The newly appointed Secretary of the Navy, William B. Franke, and Chief of Naval Operations Arleigh A. Burke attended the launching of the George Washington.

Principal speaker at the historic launching was Assistant Secretary of Defense and Comptroller Wilfred J. McNeil.

Electric Boat Man Cited by U.S. Navy

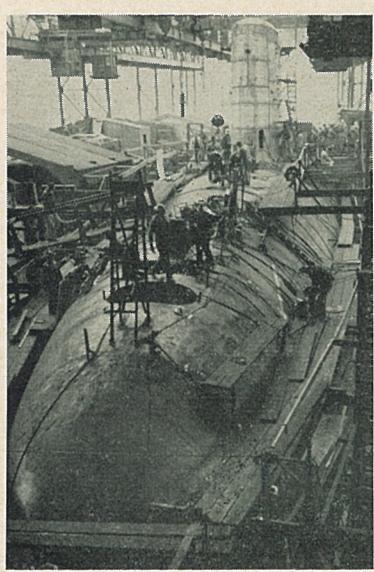
GROTON—Eugene P. Pallange of Electric Boat Division has received a letter of commendation from the Navy for his "invaluable services to the Fleet Ballistic Missile Polaris program."

RADM. William F. Raborn, Navy Special Projects Director, cited Pallange for his outstanding performance while serving as liaison between the Groton shipyard where the first FBM subs are being built and the Washington office of Special Projects. Raborn credited Pallange with anticipating areas of design and engineering difficulty and working out solutions before they became problems.

CHARACTRON Console To Control Traffic

SAN DIEGO—Delivery of the first S-C 1030 "CHARACTRON Pictorial Conflict Display Console" to General Precision Laboratory, Inc., has been announced by Stromberg-Carlson.

Seven S-C 1030 Display Consoles will be installed in an experimental semi-automatic data processing system for air traffic control now being established by the Federal Aviation Agency.



IN THE WATER—New atom-powered submarine George Washington is readied here for launching which took place yesterday at Groton, Conn.

South America Lines Consider 540 Transports

MONTREAL—Marked enthusiasm met the Canadair-Convair 540 in the first weeks of its demonstration tour of South America. Countries visited were Peru, Chile, Argentina, Brazil and Venezuela. Airlines showing distinct interest in the airplane include Avianca, Aerolineas Argentinas, REAL and Panair do Brasil.

Airline and military pilots, particularly those familiar with the Convair 240, 340 and 440, were unanimous in commanding the 540 for its outstanding climb performance, high cruise speed and easy handling when flying on one engine.

MONTREAL—Pacific Western Airlines, third largest carrier in Canada, has been taking a long hard look at the Canadair-Convair 540 demonstrator airplane now nearing the end of its North American tour.

Numerous evaluation flights and route trials have been made from the PWA base at Edmonton to Fort McMurray, Fort Smith, Yellowknife, Fort Resolution, Embarrass and Peace River and from the Vancouver PWA base to Victoria, Comox, Port Hardy and Prince George.

The airline operates scheduled and non-scheduled services throughout British Columbia, Alberta, the Yukon, the Northwest Territories and Alaska. It is also a prime contractor for the air lift to defense installations in the far north of Canada.

Stromberg-Carlson Gets Nuclear Work

ROCHESTER—A contract to build the nuclear instrumentation and safety systems and intercommunication equipment for the U. S. Army's first skid-mounted nuclear power reactor has been awarded to Stromberg-Carlson.

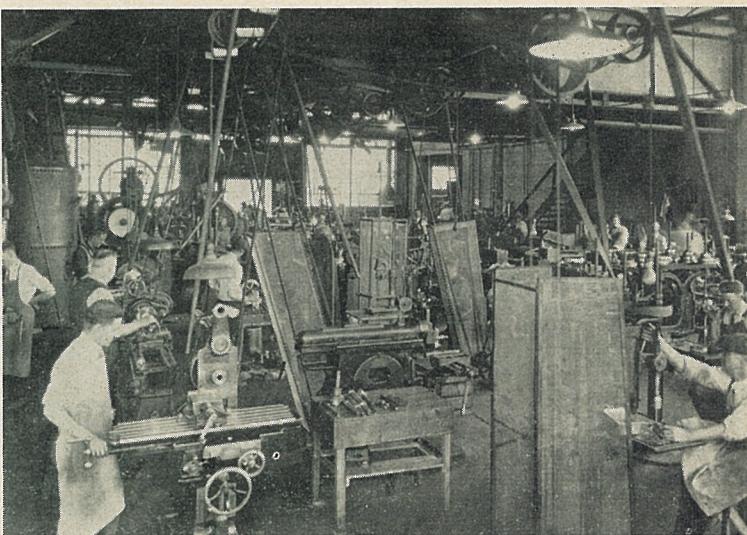
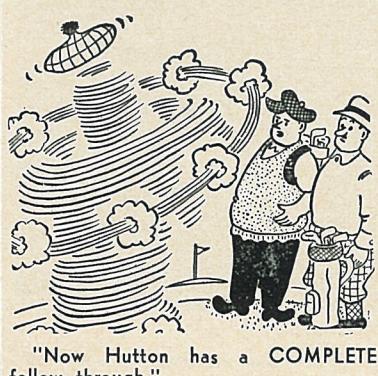
The reactor will be constructed by Alco Products, Inc., of Schenectady, under contract with the Army Corps of Engineers. Alco awarded the instrumentation contract to Stromberg-Carlson.

Designed especially for service in Arctic regions, the reactor will be built in a number of packages that can be easily transported and quickly assembled.

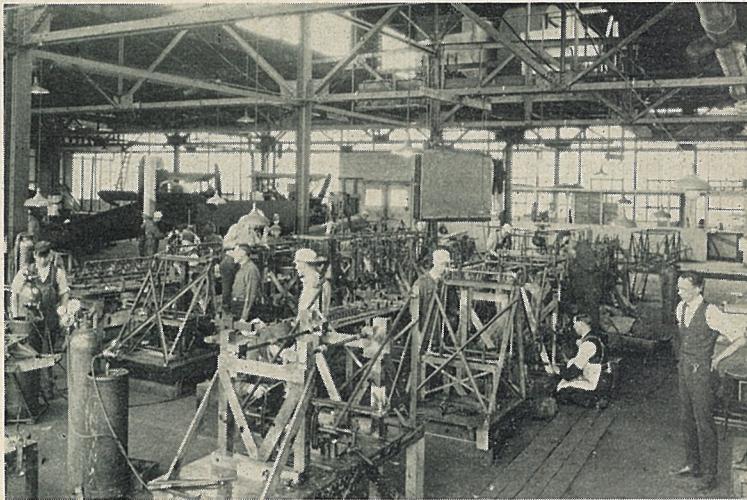
New Missile Division Created by Canadair

MONTREAL—Robert D. Richmond, formerly chief engineer of special weapons for Canadair, has been named a vice president and will have charge of a new missiles and systems division.

The move was interpreted as reflecting Canadair's determination to become a major sub-contractor for United States missile work.



A FAR CRY—This was machine shop at Consolidated's plant in Buffalo as it appeared in 1925. Below, another factory scene.



Competition Encouraged In Convair's Early Days

(This is the 10th installment in a continuing history of Convair. Previous installments have traced early beginnings as far back as 1908 which led to creation of Consolidated Aircraft in 1923, its move to Buffalo in 1924 where main product was trainer airplanes.)

Col. Virginius Clark resigned as vice president and chief engineer of Consolidated in August, 1927. George Newman Sr., who had been a director and general manager since the beginning, was elected vice president. Clark's place on the board was filled by Ray P. Whitman, a former project engineer at McCook Field, who had joined Consolidated as chief inspector in 1925. (He would serve as vice president from 1931 to 1935, then help form a new company.) Joseph M. Gwinn Jr. a Gallaudet engineer who had continued with Consolidated, was placed in charge of Unit 1 (trainer planes).

Fleet proposed to Maj. Gen. Mason Patrick, the Air Corps chief, that a single contract for 150 trainers be negotiated. This would permit Consolidated to order material in quantity without letups, and share the savings from mass production with the Air Corps. Patrick would make no commitment beyond an order for 50.

Fleet gambled on his own judgment—"I knew nobody had a better trainer, and nobody could design a better one."

He ordered steel tubing, spruce and other materials for 250 aircraft and kept the production line humming. The orders kept coming in, from the Army at intervals of 60 and 90 days (until its contracts totaled 170 planes) and from the Navy (which continued holding competitions that Consolidated always won). By the middle of 1927 Consolidated showed a cumulative profit of \$867,000 on the service trainers it had built since 1923.

Correction for Convair Record

For the record, Convair's May 27 installment of Convair's history requires correction of two points:

James L. Kelley, the Air Service representative assigned to Consolidated Aircraft when the company moved to Buffalo, was acting in a civilian capacity at that time. He was, however, a captain in the Air Service Reserve, on inactive duty. During World War II Kelley was San Diego Division manager, rather than factory manager, a post held then by Bert Bowling.

Kelley arrived at Buffalo considerably in advance of Consolidated's actual move. Felix J. Rossoll believes he was the first Consolidated man at the new plant and recalls hiring eight men to unload the three freight cars that carried the new company's equipment and materials. Previously, he had been with Gallaudet.

Rossoll is still with Convair.



ALREADY CHAMPS—While Astro personnel have been stationed at Vandenberg AFB only relatively short time, they have carved some glory in local sports world. Witness "bowling Dahles," George and May, and Vendevilles, Dave and Dorothy, who won both halves of Santa Maria mixed foursome bowling league.

Swimming Classes For Children Arranged by Astro Wives Club

Special swimming classes for boys and girls in the second through sixth grades will be offered beginning June 26 under

Two Drivers Capture Gymkhana Honors

Two Astro Sports Car Club drivers copped top spots in the Ryan Gymkhana, a championship event, held at Escondido May 24.

Bill Rector (Dept. 595-1) took first in class and best time of the day (2.98 minutes) for the affair. George Blondin (Dept. 595-1) also won a first in class.

the sponsorship of the Astro Wives Club.

Mrs. Herbert Boynton is chairman of the planning group.

All sessions will be held at 9:30 a.m., continuing until 11 each Friday morning. Mission Valley School of Swimming is the site.

Total cost for the six sessions will be \$6 per student.

Mrs. Boynton will accept reservations from mothers calling BR-3-5901.

Supervised practice for preschool children also will be offered, Mrs. Boynton said. There will be no charge for this service.

CRA Calendar

(Convair Astronautics Recreation Association has some 33 activities in operation. For information on Astro sports call CRA headquarters, ext. 1111.)

★ ★ ★

AEROMODELERS-ROCKET-BUILDERS—Meet 5:15 p.m., Friday, June 19 in cafeteria.

ASTROLENS—Meet 7:30 p.m., Monday, June 22, in executive dining room. Cameras and tripods invited for table top photography setup.

BAND—Meets 5:15 p.m., June 12, in cafeteria.

ROCKHOUNDS—Final meeting June 11, 7:30 p.m., in executive dining room to discuss fall plans.

SWIMMING—Lessons for children from second through sixth grades start June 26. Call Donna Boynton, BR-3-5901 to register.

TEEN-AGERS—Picnic at 1:30 p.m., June 13. Registration required. Call Sally Prye at HU-8-9431 or Dixie Quesenberry, ext. 1113. Dance June 20 in Astro cafeteria. Call Dixie for details.

WIVES' CLUB—Meets at 7:30 p.m., June 17, in executive dining room. Luncheon June 24 at pool side, Mission Valley Inn. Card games afterward are optional. Call Dixie Husted, CY-5-0593 before June 18 for reservations.

WHO'S ARGUING?—Some 1,000 residents of new residential area in San Diego voted Marilyn Clark of Dept. 549 area's most beautiful girl. With honor went title "Miss Loma Palisades" and prizes. An Astro secretary, Marilyn has won other beauty laurels in past.



4,000 Visitors Tour B-36 Park

An estimated 4,000 visitors toured B-36 Park and the enshrined Air Force B-36 intercontinental bomber at dedication ceremonies held May 17 at Amon Carter Field, Fort Worth, Texas.

Visitors for first time were able to climb inside both the forward and aft compartments of the Convair Fort Worth-built plane. They climbed up on steel stairways leading into each compartment. Inside they found the volunteer Convair employees and Convair Fort Worth Management Club members had polished everything to a sheen. Neat labels identified many pieces of equipment. The plane is virtually as complete as it was when it was flown from El Paso to land at Carter Field.

The bomb bay doors were open to give visitors a view of the 80-foot cavern in which a B-36 could carry a devastating load.

A steady stream of visitors—many of them Convair employees showing their families the inside of the plane for the first time—flowed through the interior from the opening at 2 p.m. until closing at 6 p.m.

Atlas Missile Pins On Sale at Astro

Stylized missile pins, replicas of an unofficial missile design seen around Convair Astronautics, are available through employee services outlets for 60 cents each.

Also on sale are larger replicas of the Atlas missile in gold and silver finish, for use as tie and lapel pins. They sell for \$1.30 each.

Engineering, one of Astro's largest groups, reported over 75 per cent participation at the first meeting.

Those attending the initial meeting asked questions and worked out details for renewal of their efforts which will continue until every employee has been given an opportunity to join.

Those on leave or vacation will be approached upon their return to work.

Through the words of their representatives, Astro employees made one point clear: the division as a whole would provide its fair share or more to a worthwhile community effort.

Gross 92 Tops Field Of Women Golfers

Marilyn Willey (Dept. 532-1) fired a 92 for honors in the May 23 women's golf matches at Bonita. Lee Stone (Dept. 130-1) was second with a 99, while Florence Givens (Dept. 591) was third with a 116.

Next event will be June 27 at Flying Hills. First tee time is 10:30 a.m. Call Lee Stone, ext. 1898, to register.

Log Book Entries Promotions

ASTRONAUTICS

Promotions to or within supervision effective May 25.

Dept. 150-0, Long Range Planning: To estimating supervisor, R. M. Williams.

Dept. 183-3, Systems and Procedures: To clerical supervisor, B. M. Ragsdale.

To office services asst. supervisor, C. H. Bowen.

Dept. 220, Manufacturing Control: To manufacturing control asst. supervisor, D. L. Riggs. To manufacturing control asst. foreman, S. C. Runkle.

Dept. 250-5, Plant Engineering: To asst. foreman, J. K. Smith.

Dept. 280-6, Inspection: To inspection supervisor, J. E. Cook.

Dept. 327-0, Support Documentation: To parts documentation asst. supervisor, V. E. Nagle, V. C. Pauls.

Dept. 343-4, Support Manufacturing Control: To manufacturing control asst. foreman, W. J. Flanagan.

Dept. 344-1, Support Operations: To asst. foreman, W. E. Greenway.

Dept. 451-0, Jigs and Fixtures: To foreman, F. W. Matern.

Dept. 510-0, Chief Project Engineer: To asst. project engineer, M. R. Barlo.

Dept. 556-5, Electronics Function: To asst. design group engineer, S. P. Hartsberg.

Dept. 597-3, Development Function: To asst. research group engineer, A. C. Ward.

Dept. 756-0, Engineering Test Support: To foreman, J. D. J. Jones, C. A. Paul, W. D. Valentine. To asst. foreman, V. H. Lowe, E. H. Maurer Jr., R. W. Scott.

Dept. 772-0, Electronic Manufacturing & Checkout: To asst. foreman, L. R. Renshaw.

VANDENBERG

Dept. 576, Convair Operations: To manufacturing control asst. foreman, D. E. Smith. To asst. foreman, C. G. Woodward.

WARREN

Dept. 351, Convair Operations: To manufacturing control supervisor, R. E. Taft. To foreman, W. L. McBride. To asst. foreman, C. Cantarini, C. E. Deckard, G. M. Esslinger, A. L. Hoy, C. W. Lacy Jr., L. Spurgeon, J. F. Wilson.

Service Emblems

ASTRONAUTICS

Service emblems due during the period June 1 through June 15.

Twenty-year: Dept. 150-0, Romie Barbat; Dept. 597-3, C. E. Edenfield Sr.

Fifteen-year: Dept. 771-0, M. L. Bjornstrom.

Ten-year: Dept. 150-0, W. J. McGrath; Dept. 280-5, C. W. Schellbach; Dept. 321-7, Howard Craig; Dept. 772, R. A. Gregory.

SYCAMORE

Ten-year: Dept. 573-3, J. M. Guess.

Personals

My children and I would like to express our deepest gratitude to our many Astronautics friends for their acts of kindness during our recent bereavement.

Mrs. R. E. Kirkpatrick and family

Births

ASTRONAUTICS

BENZWI—Son David Michael, 8 lbs., 10 1/2 oz., born May 16 to Mr. and Mrs. R. Benzwi, Dept. 541-1.

EDENFIELD—Daughter, Ann Lynette, 8 lbs., 13 oz., born May 16 to Mr. and Mrs. Charles Edenfield, Dept. 220.

SOBEY—Son, Robert William, 7 lbs., 10 1/2 oz., born May 2 to Mr. and Mrs. C. W. "Bill" Sobe, Dept. 321-3.

WILLIAMS—Daughter, Dana Marie, 7 lbs., 11 oz., born May 14 to Mr. and Mrs. W. J. Williams, Dept. 773.

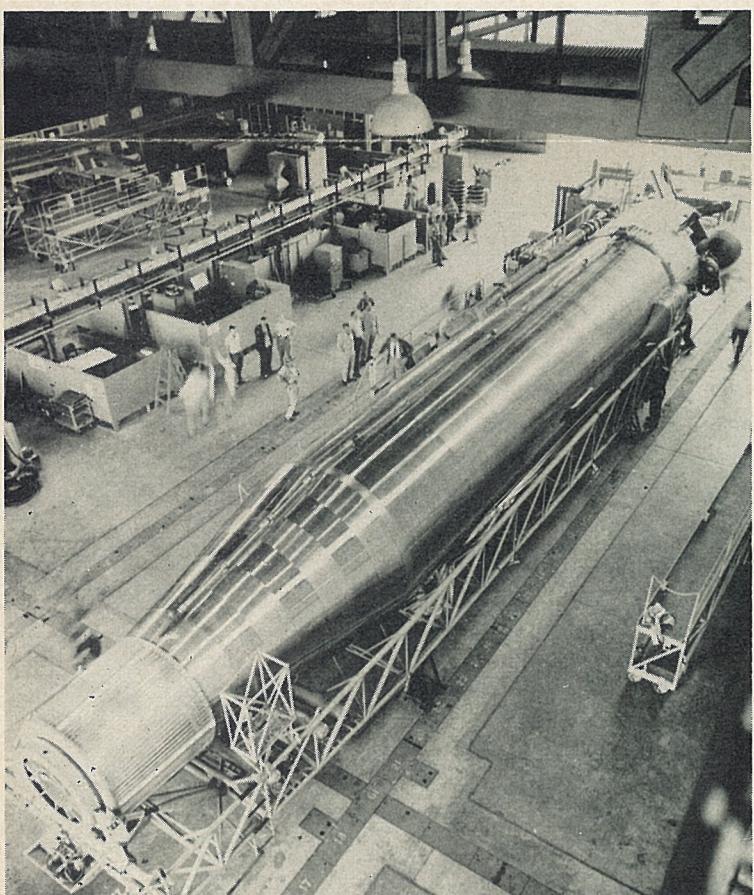
VANDENBERG

BAGWELL—Son, Michael Wayne, 7 lbs., 6 oz., born May 12 to Mr. and Mrs. C. H. Bagwell.

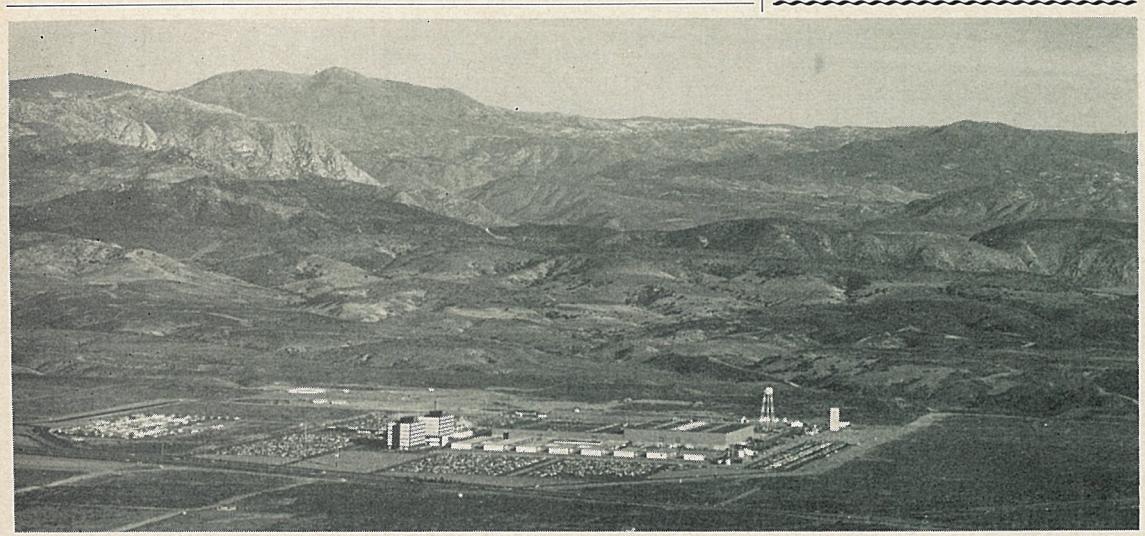
Deaths

VANDENBERG

FITZGERALD—George R., Dept. 576-1. Killed in auto accident on May 29.



FIRST STOP—This is "Hangar J" at AFMTC in Florida. It is first stop Atlas missile makes on arrival at Cape Canaveral. This is where any necessary work is performed to prepare missile for firing. Hangar (one of two assigned to Convair) also houses administrative offices on mezzanine.



PHOTOGENIC—San Diego is not only beside sea, but also near mountains, as this aerial photo of Astronautics plant indicates. View was made from west looking east.



TEEN TIMES—Full program of summer activities is on tap for teen-age sons and daughters of Astro employees through CRA sponsorship. Months ahead will find group enjoying various outings, parties, dances, etc. Typical of school time activi-

ties are dances held every other Saturday at Astro cafeteria. They include dance instruction and games. All activities are chaperoned by adults, open to both "stag" and "drag" participants. Photos were taken by Ken Rinker of Astrolens.

Baseball Nine Shows Promise

If pre-season showings are any indication, Convair Astronautics promises to have a top baseball team in action this weekend (June 12) and the remainder of the summer season.

Manager Frank White's charges took three pre-season games, while dropping only one. Victories came at the expense of Kelsey-Jenney, 8-0; Police Department, 9-0; and National City Athletic Club, 4-2. Ryan handed Astro its lone defeat, 3-1.

Players may still earn a berth on the club. Those interested are asked to contact Ray Mendoza, ext. 1111.

Spectators are invited to witness the Sunday afternoon games to be played at various parks. Sunday morning papers always list the times and locations of games for that day.

'Chokers' Hold Lead In Twilight Golf

An Air Force-contracts golf team, the "Chokers," has surged to the front in the Hookers' section of the Astro twilight golf league after five weeks of play.

The "Chokers" (Art Wood, Maj. Bill Clark, Col. George Bostwick, Frank Robbins, Clyde Ford) are two points in front of the "Pronaters" (Ron Bruck, Lyle Jenkins, John Stark, Les Lundquist, Wayne Boring).

The Slicers' league is paced by the "Lox Drinkers" (Ray Sabin, Howard Capper, Joe Wiley, Gerry Ford, Jim Tierney) with the "Mashers" just two strokes out. The latter group includes Tom McColloch, C. B. Bagaloff, Guy Farr, Forest Erwin and Ed Price.

Tuttle, Hawbaker Split Photo Honors

Larry Tuttle (Dept. 700) and Jack Hawbaker (Dept. 521-2) divided honors in the quarterly photographic contest staged by Astrolens May 25.

Bruce Berling of Naval Electronics Laboratory served as judge in the contest which was marked by the absence of black and white entries. Winners were in the color slide competition.

June 22 at 7:30 p.m. the Astrolens will feature a table top photography meet. Cameras and tripods are welcome, according to Ken Rinker, Astrolens commissioner.

CRA Sports & Recreation Convairity

Shop Softball Action Sparked by Triple Play

Some scores reminiscent of football and a rare triple play were lodged during the opening rounds of action in Astro shop softball during the past two weeks.

The triple play came in a game last week between Depts. 537-0 and 756-0 of the American league. Dept. 756 was at bat with Dick Hull up. Men were on first and second. Frank Bergstrom, second baseman, grabbed Hull's line drive for one out, threw to Don Jenkins at first for a force out, with Jenkins tossing to Dave Stein, shortstop, to nab the man going to third.

In the American, Dept. 402

drew an opening round bye then topped Dept. 597-3 by 11-2 to take the lead. In other action: Dept. 537-0 beat Dept. 756 by 9-8; Dept. 591-5 topped Dept. 537 by 9-3; Dept. 597 whammed out a 26-0 victory over Dept. 775; and Dept. 576-0 downed Dept. 591-3 by 24-4.

In the National league, Dept. 556-7 moved to the top with a 6-0 win over Dept. 772 and an 11-2 victory over Dept. 532. Dept. 325-3 won a 15-11 game with Dept. 578, with the latter beating Dept. 452-0 in a wild 21-13 game. Dept. 733 topped Dept. 220-0 by 17-7 and Dept. 532-1 won an 11-9 game with Dept. 597-1.

Following is a schedule for games during the next three weeks:

NATIONAL LEAGUE

At Linda Vista:
June 11 6:45 p.m. Dept. 556-7 vs. 220-5
8:20 p.m. 532-1 vs. 452-0

June 12 6:45 p.m. 772-0 vs. 220-6

At Astro:
June 15 6:00 p.m. Dept. 532-1 vs. 325-3

16 6:00 p.m. 772-0 vs. 578-3

17 6:00 p.m. 597-1 vs. 733-0

18 6:00 p.m. 452-0 vs. 556-7

19 6:00 p.m. 220-5 vs. 220-6

At Linda Vista:
June 23 6:45 p.m. Dept. 220-5 vs. 578-3

8:20 p.m. 532-1 vs. 733-0

25 6:45 p.m. 772-0 vs. 597-1

8:20 p.m. 556-7 vs. 220-6

26 6:45 p.m. 452-0 vs. 325-3

AMERICAN LEAGUE

At Astro:
June 10 6:00 p.m. Dept. 591-5 vs. 756-0

11 6:00 p.m. 402-0 vs. 573-0

At Linda Vista:
June 16 6:45 p.m. Dept. 402-0 vs. 591-3

8:20 p.m. 591-5 vs. 549-5

18 6:45 p.m. 597-3 vs. 573-0

8:20 p.m. 537-0 vs. 775-0

26 6:45 p.m. 756-0 vs. 575-0

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 549-5

23 6:00 p.m. 597-3 vs. 591-3

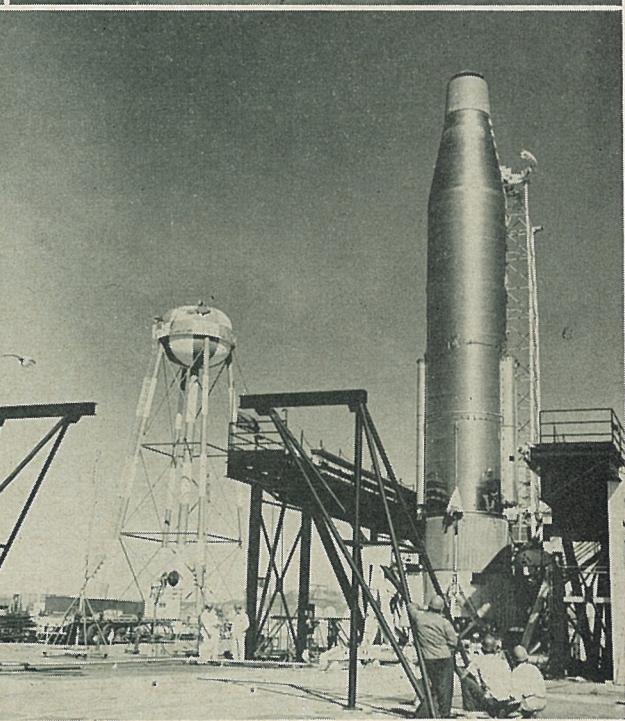
24 6:00 p.m. 591-5 vs. 775-0

25 6:00 p.m. 402-0 vs. 537-0

573-0 — bye

AMERICAN LEAGUE

At Astro:
June 22 6:00 p.m. Dept. 756-0 vs. 5



NUMBER ONE—First operational Atlas base will be at Cheyenne, Wyo., shown in top center aerial view. Launch sites are under construction at some distance from city. They will be operated by 706th Strategic Missile Wing, located at Warren AFB, one-time cavalry post (top right). Erector-launcher mechanism which will be used is shown in two lower right pictures. Top left, in shadow of state capitol

located at Cheyenne are, from left: T. B. Ragland, staff assistant; George A. Calvert, operations manager; and J. N. Mattson, chief of industrial relations. Lower left, pictured at one of launch sites under construction are, from left: Calvert, Ragland, Mattson, R. W. Mendenhall, S. R. Stager, J. J. Williams, L. Dassoff, E. E. Hixon.

Horizontal Storage Planned For Atlas at Launch Sites

Atlas missiles will be stored in a horizontal position in launch facilities now under construction at widely scattered points around Cheyenne, Wyo. The facilities will be manned by Strategic Air Command units with headquarters at Warren AFB.

Convair Astronautics is presently expanding its work forces there for approaching surveillance work in construction, equipment installation, checkout and actual activation of the launch sites.

Visitors to the sites who have seen Atlas test bases will note the absence of giant gantry towers used to hold the Atlas upright for servicing prior to tests. Instead, they will see buildings that seem to fit snugly into the surrounding areas of hills and rolling plains.

Launching pads at Warren are shaped much like a stubby "T." The long base contains the missile storage area, erector mechanism and other facilities. Across the bar are rooms for mechanical, electrical and propellant transfer equipment, work areas and storage facilities for fuel, liquid oxygen, liquid nitrogen and helium. The launcher centers the bar with a flame bucket jutting out from the top.

Nearby is what the Air Force calls a launch operations building. Astro employees will recognize it as what has been referred to as a blockhouse.

Missiles are towed into the storage area aboard their handling trailers. The missile's base is attached to the launch mechanism while a clamp on the 70-foot erector boom fits over the missile in the area of the nose cone. Lifted clear of the trailer, the missile is ready for storage, handy for work, etc.

The roof above the storage area slides back on rollers. Closed it provides protection from the weather and enemy action.

The entire operational concept for the Atlas is based on the shortest possible time lapse between the order to fire and actual launch. Operations are counted by the Air Force in terms of minutes rather than the hours now required for heavily instrumented test base launches.

Pressing a single button activates the fully automatic control system for erecting the missile. First, the roof rolls back; the erector boom begins to pivot and pull the missile into position, upright; automatic checkout of various systems gets under way as the missile is rising. By the time the missile is upright, only a short time will be required before fueling operations can be started.

Total time lapse: less than two minutes!

The process can be reversed to return the missile to storage.

Warren AFB at Cheyenne To Be SAC's First Fully Operational Atlas Base

Convair Astronautics has started a build-up of its work force at Warren Air Force Base, Wyo. that will continue throughout the remainder of this year.

Warren is the first fully operational base slated to receive the Atlas ICBM as a weapon system.

Astro forces there presently number just over 100. In the next few weeks some 150 men and women working at other localities such as the Astro home plant and Vandenberg AFB will be shifted to Warren. Additional transfers of skilled workers will follow as needed. At the same time a local hiring program will be pursued to add others.

By late December the Warren force will number over 600.

George A. Calvert, operations manager, directs Warren activities. He reports to C. F. McCabe, base activation manager, who, in turn, is responsible to E. A. Rey-

nolds, Astro's manager of product support.

The Warren operation is unique in many fields. As the initial operational unit developed under Astro's base activation program, it will be responsible for formulating and proofing many of the features to be followed at subsequent bases. To this base will come hundreds of officers, non-commissioned officers and enlisted airmen who have learned their trade in an all-out training program conducted by Astro for the Air Force.

These will be the men who have learned about the Atlas by working alongside Astro employees in the factory or by handling actual missile parts in classrooms.

Bulk of the present Astro work force at Warren is housed in what is called the base's industrial area. In time, others will work in the squadron maintenance area and at the actual launch sites.

The launch sites are under construction at points some distance from the main base.

Communication and transportation between these scattered sites and Astro's administrative offices will become a major problem in itself.

Key supervisory jobs have been filled in the Warren operation. Reporting to Calvert is a line-up of chiefs of various functions including R. W. Mendenhall, J. J. Williams, L. Dassoff, J. N. Mattson, S. R. Stager, T. B. Ragland and E. E. Hixon. The latter is presently acting as top engineering supervisor.

Warren, because of the absence of test operations, will require far less engineering personnel than Astro test base operations.

Most Astro employees will find homes in Cheyenne, just three miles from Warren. It is the capital of Wyoming with a population of about 37,500. With the base personnel and outlying areas

added, Cheyenne has a metropolitan population of about 66,000.

Rentals in Cheyenne are about the same as those in San Diego. At present there are 117 new homes under construction. However, developers are laying out many adjacent areas for residential purposes. Astro maintains up-to-date rental listings for employees.

Cheyenne is 6,062 feet above sea level and lies on the rolling plains that approach the Rocky Mountains, less than 75 miles away. The climate is mild and dry. Although winter temperatures go into the minus zero ranges, the city boasts of having almost 300 days of sunshine each year, more than Miami Beach, Fla.

Before the coming of the missile "era" Cheyenne relied heavily upon railroads (three pass through the town), oil, stock raising and manufacturing for its economy. Tourism is also a major financial contributor.

For the outdoorsman, Wyoming is a natural. There are 20,000 miles of fishing streams and 130,000 acres of lakes with 83 species of fish, mainly varieties of trout. Big game population is over 200,000 including elk, moose, bear, deer, bighorn sheep and antelope. Wyoming boasts of an antelope population alone that out-numbers its people!

Once Indian Fighter Post, Warren Has Been in Defense For Century

The military reservation that is Warren Air Force Base has been involved in defense for almost a century.

Local citizens boast of its role as a "sentinel of the nation" from "the arrow to the Atlas."

Founded in 1867 as Fort D. A. Russell, the reservation was established as a cavalry post to protect crews building the first trans-continental railroad from hostile Indians. Cheyenne grew up nearby as a construction camp and supply center for the Union Pacific. Today it remains a main terminal point for east-west transportation.

Through the years the post served cavalry troops, infantry, field artillery, quartermaster corps, aviation engineers, Air Force technical schools and now will be the first fully operational base for the intercontinental bal-

listic missile.

In 1930 the name was changed to Francis E. Warren AFB in honor of Wyoming's first territorial governor and later state senator. Warren was also the father-in-law of Gen. John J. Pershing.

The present major occupant of the base is the 706th Strategic Missile Wing, Strategic Air Command. Brig. Gen. William R. Large Jr. commands. It is one of the units of the 15th Air Force.

Warren lies just outside the northwest city limits and just three miles from downtown Cheyenne. It is a remarkable facility in every sense of the word.

Some of the buildings now in use date back to 1885. They are tall, stately red brick structures with white columns. For the most part they face a huge parade ground.



"This new craze has run me completely out of sacks."



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

Convairity

Vol. 12, No. 13

Wednesday, June 24, 1959

SAN DIEGO, POMONA, ANTELOPE VALLEY, VANDENBERG AFB, CALIF.

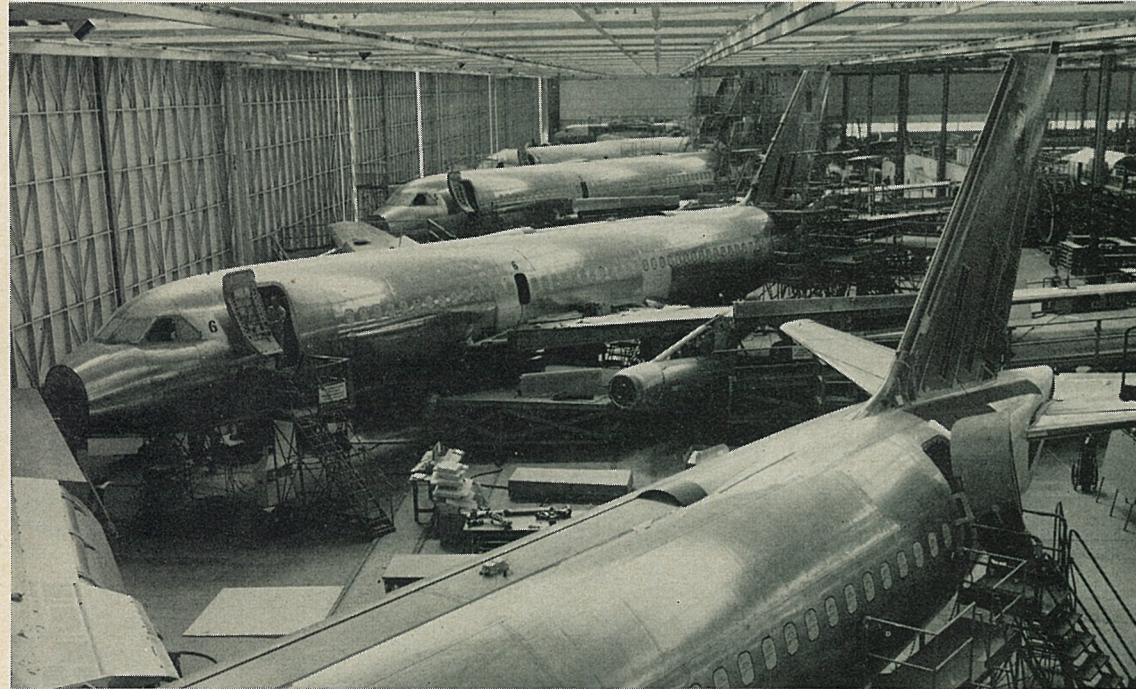
Astronautics

EDITION

Serving Astronautics' San Diego plant and facilities at AFMTC, Fla., and Vandenberg AFB, Calif.

Astro news office, Kearny Mesa plant, ext. 1154. Vandenberg news contact, ext. 8-4148. AFMTC news contact, ext. 3038.

AFMTC, CAPE CANAVERAL, FLA., FORT WORTH, TEX.



"NEST" OF 880s—Convair jet transports are filling Convair SD's Bldg. 3 at Plant 1 with four of giant birds in various stages of completion nestled side by side across west bay area. No. 4 is due to go to field operations latter part of July.

Turbo-Compressors Accepted, Installed

Three ship's sets of the final configuration of Convair 880 turbo-compressors have been accepted by Convair SD and are now installed in planes Nos. 1, 3, and 4.

The turbo-compressors, built by Hamilton Standard, division of United Aircraft Corp., Windsor Locks, Conn., pressurize the 880's cabin and flight deck for passenger comfort regardless of altitude.

At altitudes up to 21,000 feet, the units maintain sea level pressures inside the plane. At higher altitudes, cabin pressure gradually increases to the equivalent of 8,000 feet when the transport is flying at 35,000 feet.

Besides acting as a pressurization unit, the turbo-compressor provides fresh air for the air conditioning system which maintains a 75-degree temperature and 40 per cent humidity level in the cabin.

Although each 880 will be equipped for a pair of turbo-compressors for normal operation, full pressurization can be maintained by one of the units.

Fourth Jet 880 Readied For Field Ops. in July

Four big Convair 880 jet transports are lined up for the first time in the final assembly building (Bldg. 3) at Convair San Diego Plant 1.

Three of the giant birds spread-eagled across the west bay of the building are in final assembly work while the other one (No. 7) is in major mate, said Harry G. Rote, final assembly superintendent. By mid-December, Rote said he expects to have all major mate and final assembly stations—four final assembly and four major mate—filled with near-completed 880s.

Next plane to be released through the big sliding doors will be No. 4 which is scheduled to go to field operations July 22. First plane to have interior configuration installed, No. 4 is in final assembly undergoing completion of interior trim.

First ship's set of 12 club compartment seats has been received from Chance Vought Aircraft Co., Dallas, Texas, for in-

stallation in the lounge of the plane. For the time being, Convair-Liner 440 passenger seats will be used during testing until 880 passenger seats arrive some time this fall.

Plane No. 4 is due to join planes No. 1 and 3 in flight test in mid-August for testing of acoustical and air conditioning systems.

The next companion ship on the final assembly line, No. 5, will be the first Convair 880 to bear the colors of a customer airline. It will be painted with the red and white insignia of Trans-World Airlines.

The 13th Convair jet transport will take its place on the line this week after its wing sections have come out of the Scotchweld oven. Wings for ships No. 14 and 15 are now in the wing bucks and those for No. 16 are due in about the first of July.

"All the lines moves are right on schedule," reported C. W. Clark, wing assembly general foreman. "Assembly work on the 880 is proving most satisfactory, surpassing all expectations for a new version."

Planes are now moving down the primary line at 16-day intervals between station moves. Wings are coming out of the bucks every 12 days to go to the Scotchweld oven. Although it takes 24 days for wings to be assembled in the bucks, the ships are going into the bucks on a staggered schedule so that a complete ship is moved out every 12 days.

Four planes (Nos. 10 through 13) are now in wing primary locations with Nos. 8 and 9 in major mate stations at the north end of Bldg. 2.

Detailed fabrication is now in process for the Convair 600 with the first follow-on ship to the 880 scheduled to go onto the production line in mid-November. First sub-assemblies for the 600 wing will start on July 20.

"Although the 600 wing is practically an entirely new design from that of the 880, we anticipate no difficulty whatever in transferring our production crew to the new Convair jet transport," explained Clark. "Our experience on the 880 has given us the know-how for construction of heavy structures so that the transition should be accomplished smoothly."

American Airlines has contracted for 25 of the Convair 600s with an option on an additional 25.

Hospital Pledges Climb Near \$1 1/2 Million Mark

Contributions to the Tri-Hospital Fund Drive at Convair SD and Astronautics are expected to total more than \$1 1/2 million during a three-year period. This is based on statistics available late last week.

Campaign officials made the prediction based on projected final returns and estimating an average hourly wage for each employee.

Pledges to support the drive at the two divisions had shot past 60 per cent of the total population with more than six thousand cards still to be returned or processed at presstime.

Employment Climbs To 15,000 at Astro

Employment at Convair Astronautics early this month passed the 15,000 mark.

Through June 14 the total was 15,176. Of these, 12,561 were assigned to the San Diego area; 1,101 at the Air Force Missile Test Center, Fla.; 914 at Vandenberg AFB; 390 at the Missile Static Test Site, Edwards AFB; 209 at Warren AFB. These figures apply to employees permanently assigned.

On the other side of the ledger, officials said a surprising number have volunteered to contribute more than the required amount. Some have asked that their deduction be increased from one day's pay a year for the three hospitals to one day's pay annually for each one of the hospitals.

As the drive goes into "clean-up week," campaign teams, including a union shop committeeman and a member of supervision, are continuing to make personal contacts with employees who have been on vacations, sick leaves, etc.

Astronautics employees planning to attend evening classes at San Diego State College this fall may be interested in a new registration priority system recently installed.

Special registration cards are being provided and filed as they are received. All must be in before Sept. 7. Registration for classes will be in the order of card receipts.

Astro's educational services can provide information on various programs at State.

Astro Expanding Telephone Service With More Lines

The third major expansion of telephone facilities since Astronautics occupied its new plant is expected to be made around July 1.

At that time new equipment installed in Astro's telephone center in Bldg. 4 will be cut into regular telephone facilities.

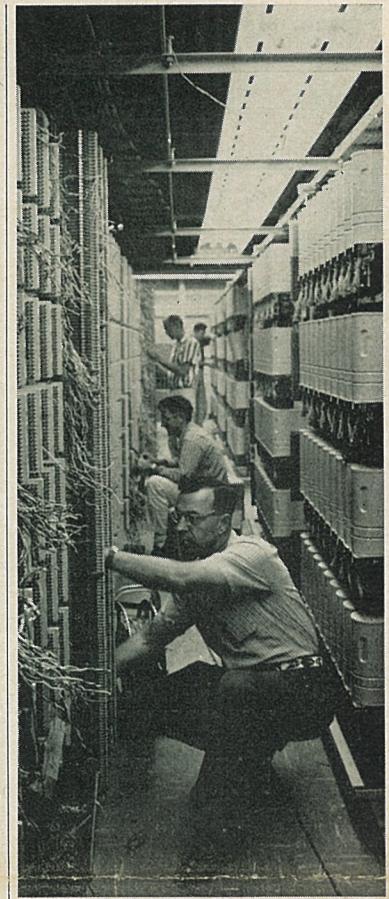
This represents three new positions on the Astro telephone switchboard, bringing the total to 16. Telephone-wise, Astro will have facilities for 1,200 new in-plant lines resulting in a total capacity of 3,000 lines.

Major use of the present expansion will be to provide telephone service for an estimated 400 lines to be installed in Astro's new two-story office structure now under construction. However, other lines are slated for issue to present plant telephone users. This will allow some elimination of button-type telephones which will, in turn, reduce Astro's cost for service.

Western Electric, installers of telephone equipment, has been working some 31 installers on two shifts over the past eight weeks readying the service. Additional work on a one-shift basis dates back even further.

Installation of additional equipment necessitated almost doubling space in Astro's telephone switching center. This required construction of a new area formerly devoted to patio space in Bldg. 4.

Something like 150,000 individual connections were required for the present expansion.



BACKSTAGE—Third major expansion of telephone facilities at Astronautics will be cut into system soon, providing additional service. Western Electric installers above make connections. Scene is in Astro's telephone center, Bldg. 4.

Astro Offsite Bases to Compete Among Selves in Safety Contest

Convair Astronautics this month introduced a new safety contest, pitting off-site locations against one another for honors.

At stake is the Atlas Safety Award.

Here's how it works. Each base maintains exacting records on the number of serious medical cases each month. These cases are "prorated" with the number of manhours worked at the base for the month. The installation with the best averages receives the award for one month or until another base wins it. At the end of the year the off-site installation with the best record retains the award permanently.

One unique feature is that all off-site employees, both operational and engineering, are participating.

Astronautics has conducted monthly safety and good house-keeping contests at its main plant for some time. However,

SD State Adopting New Priority System

Astronautics employees planning to attend evening classes at San Diego State College this fall may be interested in a new registration priority system recently installed.

Special registration cards are being provided and filed as they are received. All must be in before Sept. 7. Registration for classes will be in the order of card receipts.

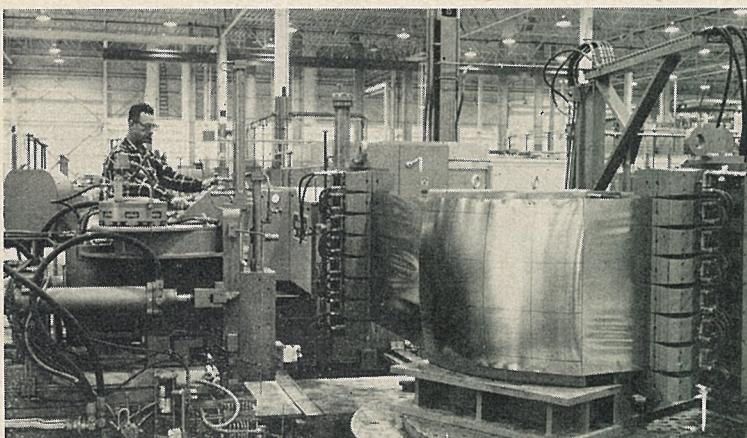
Astro's educational services can provide information on various programs at State.

Employee Services Driver-Rider Files Open to New Hires

New employees joining the Convair Astronautics San Diego work force, plus those who have recently changed work stations, may be interested in consulting driver-rider files available through employee services.

These files, arranged by geographical locations, provide the names of employees who are interested in taking rides or who may be seeking a ride. From them many car pools have been formed which save the individual transportation costs and lessen traffic and parking problems.

Driver-rider files are maintained in employee services office, Bldg. 8. Astro employees working at San Diego Division may consult a special file located in industrial relations, Column X22, first floor, Bldg. 4, Plant 1.



BIG STRETCH—Thin stainless steel sheets are made even thinner for Atlas missile parts with new radial draw former in use at Astro. Charles Davis operates controls as sheet is drawn over die to make contoured parts. Machine eliminates welding of smaller parts together.

Thin Sheets of Steel Thinned Even More by 93-Ton Former

Convair Astronautics recently pressed into service a huge (93-ton) machine which stretches already thin stainless steel sheets into even thinner skins for the AF's Atlas missile.

This is a radial stretch former, largest in the United States to use a hydraulic-driven turntable. It was built to Astro specifications by the Cyril Bath Company of Ohio.

The machine is used to form contoured metal parts to exceptionally close tolerances required for the Atlas without metal waste normally associated with cutting-type machines.

Astronautics has installed the former near the east wall of the factory low bay area. It is the

largest of all equipment employed by Astro's sheet metal department.

A radial turntable weighing 37,000 lbs. contains a die for the part to be formed. One end of the thin stainless steel sheeting is gripped by "jaws" on the turntable, the other is placed in the "jaws" of the main stretching unit. Controlled tension is maintained on the metal as it is drawn over the outer surfaces of the die as the turntable revolves. At the same time a "compression shoe," shaped to the profile of the die, presses the metal against the die face.

In this manner, a 20-foot section of stainless steel, already thinner than a dime, can be stretched as much as 18 inches.

Utilizing the machine, Astro can produce in single pieces metal shapes and parts that previously called for the welding together of several pieces.

Electronic measurement of the metallurgical changes occurring during forming allows close control of tension. This system automatically controls tensions during forming cycles, while a special recorder provides a graphic record of stresses for later references.

Over-all length of the main stretch ram and its cylinder is 82 feet. One end goes "underground" to allow normal passage along a factory aisle.

COMPUTER SYSTEM PROVIDES SPEEDY SPARE PARTS INFO.

An intricate electronic computer system to provide instantaneous information on spare parts and ground support equipment for the AF Atlas missile program has been installed by Convair Astronautics.

The system, developed by Astro for its inventory management, is built around a RAMAC 305 computer manufactured by International Business Machines Corporation.

It is installed in Bldg. 4 at San Diego Division's Plant 1 as part of the new support center organized under Astro's product support department.

Within seconds the system can provide a complete history of a part. This information includes the date the part was issued, its price, quantity on hand and whether a part is in transit to a user and the rate at which the part is being used.

Key use of the system will be during the build-up of operational bases for the Atlas missile. Once these bases are complete, spare parts control passes to the Air Force.

At present the system is being set up to keep track of items at Atlas test bases in California and Florida as well as the initial operational base at Warren AFB, Wyo. and at Vandenberg AFB.

Each Atlas missile contains more than 40,000 parts. Refinements are made in almost every missile during the current research and development program.

Fifty large magnetic disks arranged in a vertical stack constitute the system's memory file. Astro has two of these files with a combined storage capacity of 10 million characters.

Astro Scholars Given Awards

John Frank De Pauli and Veronica Charlotte Field have been named winners of the first annual Convair Astronautics Management Club scholarship program.

The winners, plus runners-up Judith Ann Luke and Donald Earl Sheeran, were honored with their parents at the June 17 meeting of the club at Lafayette Hotel.

The winners received \$500 scholarships each, the runners-up received \$100 Savings Bonds.

Veronica, daughter of Thyrsis B. Field of Dept. 545-3, is a senior at Helix High. John, whose father, John V. De Pauli, is in Dept. 130-1, is a Mission Bay High senior. The latter's scholarship is known as the Hans R. Friedrich Memorial Scholarship.

A Helix High senior, Donald is the son of Earl W. Sheeran of Dept. 350-1. Judith Ann is the daughter of G. E. Luke of Dept. 758 and a senior at Cathedral Girls High.

Convairity

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations. General Offices, San Diego, Calif., Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Grace Fath, Helen Pemberton, Fred Bettenger.

Astronautics Editorial Offices, Bldg. 2, new plant, ext. 1154. Staff: Bryan Weckersheimer, news editor.

FW Editorial Offices, Col. 73C, ext. 2961. Mailing address: Convairity, Convair, Fort Worth, Texas. Telephone PERSHING 8-7311. Staff: Bob Vollmer, news editor; H. A. "Pat" Baker Jr., Mary Beck.

Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Offices, Room 31, Bldg. 301B, Palmdale, ext. 337. Staff: Betty Lou Nash.

Summer Camps Given Support From Con-Trib

Astronautics employees have given a big boost to summer camp programs in the San Diego area through financial action taken by the Astronautics Con-Trib-Club.

Through this help many needy boys and girls will be able to attend. Some could well be sons and daughters of Astro employees.

Con-Trib-Club gave \$1,500 to camp programs sponsored by such groups as the Salvation Army, Girl Scouts, Bayside Social Center and the Jewish Community Center. The funds will send needy children to camp.

These camp-sponsoring groups, as well as many others in San Diego County, have facilities for those who can pay. For those who can not afford to send their children to camp, special arrangements can be made.

Employee services section, Bldg. 8, will have application blanks for summer camps. Blanks, duly filled out, may be returned to employee services for transmittal.

In addition to the financial help extended summer camp programs, Con-Trib-Club has also earmarked funds for 6th grade campership programs this fall. Disbursements totaling \$1,000 will go to school districts in Chula Vista, La Mesa-Spring Valley, Lemon Grove, National City and San Diego for camp activities during the coming school year.

Astro Drops Regular Air Service to MSTS

Convair Astronautics has cancelled its regular bailed airlift to Missile Static Test Site, Edwards AFB, but has made arrangements for utilization of two-per-day service being offered by Convair San Diego.

Flights will be via San Diego Division's C-47, departing Lindbergh Field at 8:30 a.m. and 4 p.m. and returning at 9:50 a.m. and 5:20 p.m.

The Astronautics plane formerly used on this route is being retained on an "on call" basis to augment the C-47 flights and to make special flights.

Astro personnel will continue to make reservations through the Astro reservation desk, ext. 636.

Would-be Travelers Will Meet July 6

Would-be European tourists at Astronautics will meet at 7:30 p.m. July 6 in the Astro cafeteria to map final plans for a two-week group tour being planned through Astro CRA.

However, only about 50 are signed up. Another 29 are needed to meet minimum tour requirements.

The tour is offered in two versions. One is a package tour for \$629, the other is air fare only for \$449.

All potential travelers are invited to attend the meeting or contact Elaine, ext. 1111, for details.

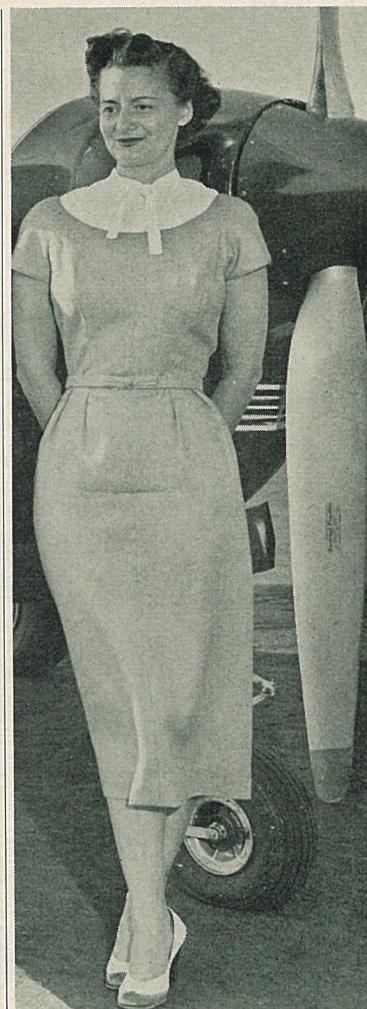
Astrolens' Meetings Now One a Month

Astrolens have voted to drop one of their two monthly meetings during the summer months, Commissioner Ken Rinker reports.

Regular meeting will be at 7:30 p.m. the second Monday of each month at the Astro executive dining room. The July 13 meeting will feature a model shoot with Marilyn Clark (Dept. 549-10) and Nancy Williams (Dept. 130-1) as subjects.

EVERETT APPOINTED SOFTBALL MANAGER

Appointment of Bob Everett (Dept. 327-1) as manager of Astro's entry in city softball circles has been announced by Commissioner John Sentovic.



RACER — Terry Vasques of Convair SD Dept. 6 leaves this week on annual Transcontinental Air Race.

SD Aviatrix Enters Race

For the second year, Convair SD's aviatrix, Terry Vasques of Dept. 6, will be flying coast to coast in the annual All-Woman Transcontinental Air Race.

Terry, a SD dynamics engineer for over four years, will leave San Diego this Friday (June 26) in her Beech Bonanza D35 to reach the starting point, Lawrence, Mass., by takeoff time on the Fourth of July.

She will be accompanied by Anna Christensen, a Rohr Aircraft Corp. secretary, as co-pilot on the 2470-mile cross-country course which will terminate at Spokane, Wash., on July 8. The two San Diego women will take off from Lawrence Municipal airport in No. 3 position.

Terry estimates that they will have 50 hours actual flying time in the air by the time her plane drops down on home field after the return trip from Washington.

She has already logged 330 hours in the nearly five years she has been flying with two cross-country trips to New York and back as well as other jaunts to Mexico City, the Midwest, Seattle, San Francisco, and numerous shorter trips.

Her husband, Horace Vasques, Astronautics senior electronics engineer, also holds a pilot's license.

The Air Race is sponsored each year by the Ninety-Nines, Inc., an international organization of licensed women pilots.

EX-NEW JERSEY FOLK SOUGHT

Emil Minette of Astro's still photographic laboratory, former Newark, N. J. news photographer, is interested in contacting former residents of New Jersey for a possible photographic report on their life in San Diego. Those interested may contact Minette after work at BR-3-1520.

Memorial Service Planned for Diver

Memorial services will be held for Robert L. Pamperin of Convair Astronautics, killed by a shark while skin diving off La Jolla, but the date had not been set by presstime.

Pamperin was a member of the land lines section of engineering and has been with Convair since 1950. Born in Norfolk, Va., he attended grade school in Coronado and was graduated from San Diego State with a degree in electrical engineering.

Survivors include his wife, daughter, Michelle, and son, Bryan, and his parents, Capt. and Mrs. L. S. Pamperin, USN, ret., of Coronado.

Tom Wills Takes Over Engineering Position

Two temporary assignments within the Convair Astronautics industrial relations department have been made by M. V. Wisdom, manager of industrial relations.

T. W. Wills, employment manager, has taken over as industrial relations administrator — engineering, replacing G. N. McMillan. McMillan has transferred into the Astro engineering administration section.

Filling in for Wills pending selection of a replacement for McMillan will be W. B. Jones of the employment section.

New Course Explains Computer Techniques

Two Astronautics electronics engineers, Jean C. Terrell and Robert W. Maloy, recently attended a seminar on advanced digital computer techniques, the first of its type staged for industry.

Conducting the course at Hawthorne, Calif., was the National Cash Register Co.'s Electronics Division. Twenty-two representatives of 11 weapon systems contractors on the west coast attended.

Navy Movie-TV-Photo Reserve Unit Seen

Ex-Navy personnel, commissioned and enlisted, at Convair installations in the San Diego area who might be interested in a Naval Reserve "Motion Picture-Television-Photo" unit are invited to contact Bob Montague of Convair Astronautics. Montague, a member of Astro's motion picture section, may be reached at ext. 1525 for details.

Coin Club Displays To Be Seen at Fair

Several members of the Astronautics Coiners will be showing their collections in the numismatic displays at the Southern California Exposition and San Diego County Fair which opens at Del Mar June 26.

Numismatic exhibits will be located under the grandstands near the east end.



"One thing about Jackson—he always uses his head on the job."

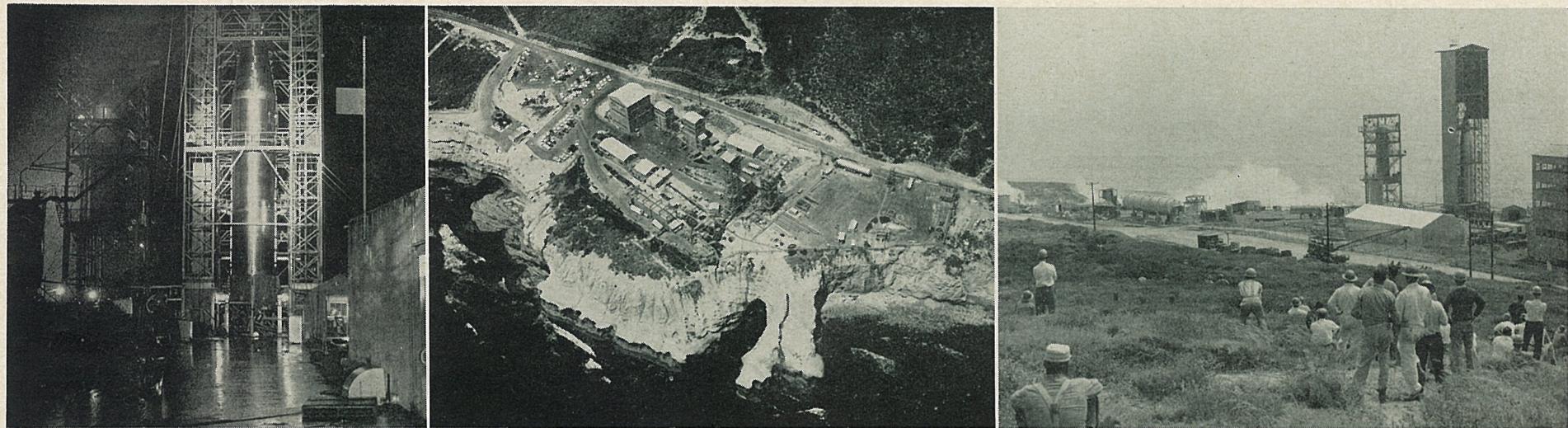
Home for Children Grateful For Con-Trib-Club's Gift

Each month Convair Astronautics receives several letters from charitable groups expressing thanks for funds given them on behalf of all employees through the Con-Trib-Club.

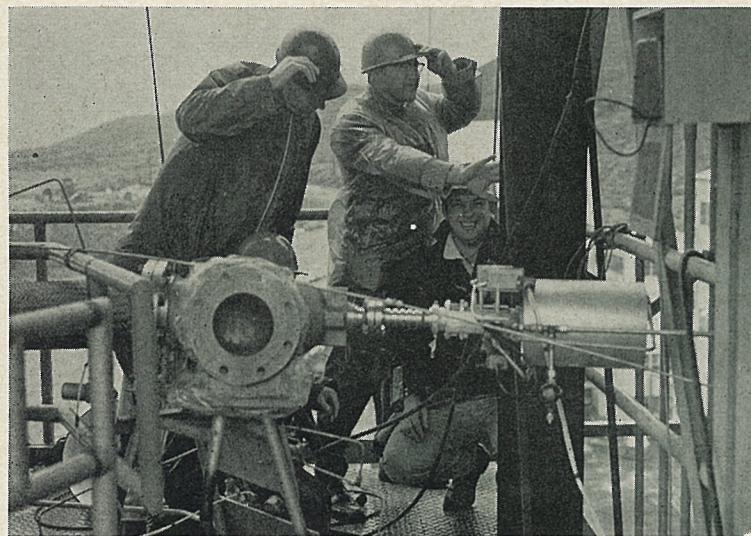
Typical was a letter from Mother Patricia Magdalen, mother superior at the Nazareth House, a home for children. (Con-Trib-Club gave this group \$650

for the purchase of athletic equipment for the children.)

The mother superior wrote, in part: "Words fail to convey to you our grateful thanks and appreciation for this generous gift, or express the sentiments of our hearts for your great kindness. However we can and do assure you of our prayers and those of the little ones under our care."



ALMOST DOWNTOWN—Point Loma is oldest, but least known, of Astronautics test sites for AF's Atlas missile. Center is general view showing buildings at site, plus Pacific coastline. At left is rainy night shot of fuel tests. Certain tests require evacuation of personnel (right) who watch smoke rise from nearby hillside.



HOLD YOUR HAT—Wind and rain lashing in over Pacific provide ideal elements for special tests. They also cause Joe Dudash, M. H. Greenspan and Lon Jordan to clutch their hard hats as they work high atop tall fuel flow test tower.

Point Loma 'Granddaddy' Of All Astro Test Bases

BY BRYAN WEICKERSHEIMMER
Convairity News Editor, Astronautics

If you want to bake, broil or freeze; drop, immerse or squeeze; shake, rattle, pound, pull or merely test to destruction missile parts, systems or components; then Astronautics has the equipment for it.

Chances are, this equipment is now on hand or can be set up at Astro's Point Loma test site near San Diego.

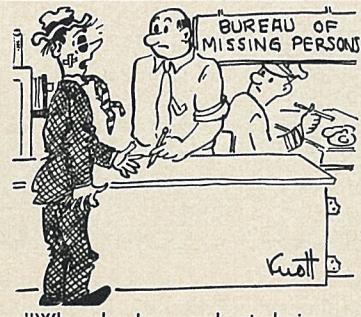
Point Loma has long been Astro's "silent" member among test bases. Little has been written about it. However, it is the "granddaddy" of them all in age. In December, 1953, Convair leased the 50-acre site from the Navy. Activation came in October, 1954.

(Convair missile testing on Point Loma actually dates back to 1947 when static tests on Convair's ICBM research rocket, the MX-774, were conducted on a 13-acre site north of the present installation.)

Perched on a shelf just above the Pacific, the test site is surrounded (outside the security fences) by a brush-covered area. A single road provides access. Although the site is readily visible from the ocean side, special effort is required to view it from the ridge of Point Loma.

These windswept reaches have long been a boon to Astro men performing special wind and rain tests. When these climatic conditions occur, there are usually Astro men braving the elements.

Point Loma is a branch of the engineering test laboratories at Astro and as such fall under the supervision of R. S. Campbell, chief of test labs. R. C. Hinck, group engineer, is in charge at the site.



"Who do I see about losing my wife?"

However, individual tests are set up and conducted by test engineers from such groups as systems, components, instrumentation design and other labs. Dept. 756 contributes the main work force and performs most of the mechanics of preparing for tests. Foreman J. D. Jones heads this group. Many other departments have representation among the 160 employees assigned there regularly.

Point Loma is virtually all "male." No women are assigned there. The feminine element revolves around a daily visit by a plant nurse and an occasional visit by a woman engineer.

Tests performed can involve complete missiles, although most effort is involved in component and sub-assembly tests. Test specimens may be straight from the assembly line or may be "one of a kind" items. They can also be missile parts from other test bases. For instance, Atlas missile tanks now being tested in one installation came from a missile previously static tested at Astro's operation at MSTS, Edwards AFB.

Duration of tests vary from a few seconds to more than a month. Some call for an around-the-clock vigil, although normal operations at the site are conducted on a two-shift basis.

Remoteness of the area is one of its key assets. Some tests considered potentially dangerous call for evacuating the area. Crews watch from vantage points along nearby slopes or a reinforced concrete blockhouse.

Campbell this week voiced high praise for those who man Point Loma.

"We have much standard test equipment available," he said. "But some items we need just can't be purchased. When this happens our people build what they need, showing great originality."

"I know of few occasions when results weren't forthcoming on schedule," Campbell added.

(Point Loma's unique new environmental chamber, which can accommodate an entire AF Atlas missile, will be covered in a later story.)

Novel 'Aerial Photograph' System Used to Design B-58 Crew Stations

Unique to the aerospace industry is Convair Fort Worth's system of three dimensional measurement used to design crew stations for the B-58 Hustler and produce refinements.

Called "photogrammatics," the new method was developed by Convair engineers after the idea was batted around at Wright Air Development Command. Actually it works much like aerial photography.

Jack Chaffee of the human factors group said it is important in crew station design for engineers to know the exact amount of movement a man can make efficiently from any given position. For instance, they need to know how far the right or left hands can move to reach controls.

To achieve this and to have a permanent record of data, Chaffee and the human factors group, with an assist from photo lab crews, applied the photogrammetric process.

Design engineers placed 211 different subjects physically representative of pilots and crew members, in a simulated B-58 station and started the cameras going.

Each subject—clad only in trunks in order that his movements could be pinpointed with precision—was "spotted" at numerous key points on his body with white discs.

Three studio type cameras, one above and two facing the subjects from different angles, were set up. All cameras recorded at

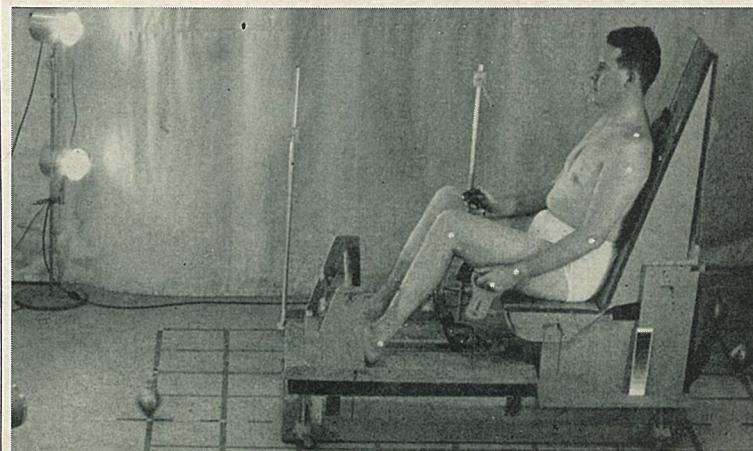
the same time.

The subjects, seated on a marked off grid area, were illuminated by six strobe units. Special wires were also used from floor to ceiling to help form the grid.

After the pictures were processed, precise measurements

were calculated by algebraic scale by plotting x, y and z to various grid points.

Not limited to development of the crew stations, engineers are now using photogrammatics in testing muscular strength to see how much force pilots put on controls in the supersonic Hustler.



HUMAN ELEMENT—"Model" sits in seat in photogrammetric measurements lab. Three cameras shoot from three different angles, recording limits of movement. Note white "dots" attached to subject. These enable engineers to plot measurements mathematically.

880 No. 1 Will Be Laid up For System Up-Dating

Both of Convair's jet transports now in flight test status have been away from home base during the past week.

Plane No. 1 spent last weekend (June 19-21) at North Island Naval Air Station on public display at the annual Navy Relief Benefit Carnival.

After returning to Lindbergh Field, No. 1 is back in its stability and control testing program. Piloted by Don Germeraad, chief engineering test pilot at SD, with W. D. Carrier, production flight pilot, as co-pilot, the first 880 will continue the current testing throughout the rest of this week.

Present plans are to put the plane on lay-up status next Monday for several weeks to bring it up to date with system changes which are intended as production configuration after they are proved out. After the recommended changes have been evaluated, flight test engineers expect the first completed 880 to be ready for FAA check-out on control systems.

The second 880 in flight test, plane No. 3, flew to Edwards AFB Monday of this week (June 22) to spend a week-and-a-half (until July 1) undergoing take-off and landing tests with John Knebel, engineering test pilot, at the controls.

The present desert testing is a preliminary workout for plane No. 3 before it is sent back to Edwards in mid-August for a six-week period of maximum weight performance tests in take-offs and landings. At that time, it probably will undergo FAA certification for that portion of the testing program with an FAA pilot flying the big transport.

Co-pilot with Knebel in recent flights has been A. P. Wilson of production flight. Both Wilson and Carrier are being checked out in the 880s in preparation for the time when they will be piloting one of the white and gold ships.

Ohman Checked Out in TF-102A, Transitional Trainer for B-58

Brig. Gen. Nils O. Ohman, commanding general of the 19th Air Division, Strategic Air Command, early this month received his delta pilot's credentials for checking out in a TF-102A at Carswell AFB, Texas.

The Convair-built TF-102A is being used as a transitional training aircraft in the current B-58 Test Force at Carswell. Before a pilot can be checked out in the B-58 he must complete six hours and ten landings in the TF-102A. One ride must be with a qualified B-58 pilot.

The TF-102 was chosen as a transitional aircraft to the B-58 because of its delta wing configuration as well as similar flight characteristics of the two

Convair planes. The B-58 Test Force is at present a joint ARDC and SAC operation with SAC slated to assume full responsibility for the program early next year.

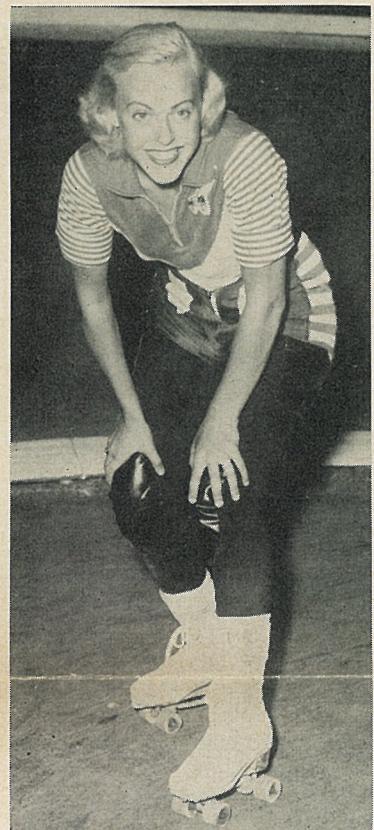
SAC pilots checked out in TF-102As so far are Col. R. E. Evans, commander of the 3958th OE&T Squadron, Lt. Col. A. W. Blizzard, Maj. T. E. Clodfelter, Maj. H. E. Confer, Maj. H. J. Deutschendorf, and Maj. J. W. Valentine. ARDC pilots checked out are Col. David M. Jones, director of the B-58 Test Force, Lt. Col. F. Finberg, Maj. L. W. Amos, Maj. E. E. Brady, Maj. V. M. Kummel, Maj. K. K. Lewis, Maj. J. R. Phillips, and Maj. E. E. Jahnke.



CHECKED OUT—Brig. Gen. Nils O. Ohman, commander 19th Air Division SAC (second from right) receives certificate as proof of check-out in Convair TF-102A from J. S. McQuay, Convair SD field service rep. at Carswell AFB, Texas. Looking on is A. S. Witchell of Convair Fort Worth customer service at far left and Col. David M. Jones, B-58 Test Force director (far right).



COMING THROUGH—George Vogt of Convair SD flashes form of old that won him "most valuable player" award in professional Roller Derby competition in 1952. Vogt traveled to Europe and Australia as player and coach of some of top pro teams.



DERBY DARLING — Carole Vogt, now working in General Offices, combined charm with skating prowess to attain recognition in early '50s as one of top gal Roller Derby skaters.

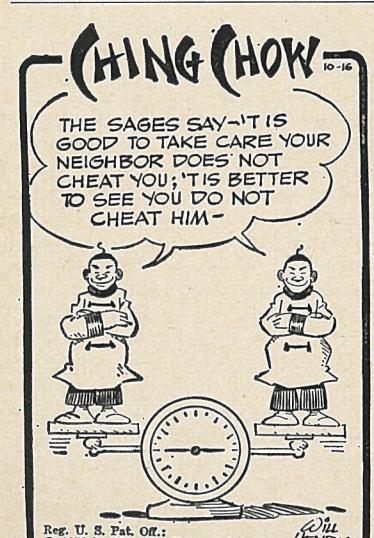
Convair FW Counts 250 'Pro' Engineers

Four Convair Fort Worth flight test engineers are new members of the Texas Society of Professional Engineers, Frank Clayton reported this week.

They are: Donald R. Foreman, Raymond R. Hall, Gary D. Hartom and Thomas L. McCutcheon.

Clayton, chief of plant engineering and a director-at-large of the organization, said approximately 250 Convair men are Registered Professional Engineers. Of these, more than 130 are members of the Texas Society of Professional Engineers.

Twenty-five Convair employees have received certification as professional engineers during 1959.



Reg. U. S. Pat. Off.
© 1958 by News Syndicate Co. Inc.

K. L. HENRY

Convair FW Man Goes to Moscow To Help Build Unique Fair Exhibit

E. J. (Jim) Boone, technical editor on the Convair Fort Worth nuclear program, has returned from a seven-week tour of duty in Moscow.

On leave of absence from Convair, Boone was a member of an American party assigned to build a theater-in-the-round similar to Fort Worth's famous Casa Manana. Arranged by the U.S. Department of State, it will be used as a trade fair exhibit and ultimately will be sold to the Russian government.

"Twice the size of the Casa Manana, the new theater has a 112-foot radius, which makes it the largest theater dome in the world," Boone reported.

Boone, who learned the Russian language in an Air Force course at Syracuse University and is a part time instructor in TCU's Russian department, served as translator and engineering administrator for the American visitors. Construction was largely a "package deal" with prefabricated parts coming from the United States. Russian labor was used for assembly.

The Russians worked an "American" shift of 8 a.m. to 5 p.m. during construction of the gigantic theater.

Incidentally, Moscow stores open at 11 a.m. and remain open until 8 p.m., six days a week.

Boone found opera and ballet more popular than movies in Moscow. Motion picture houses show no American or English films, only Russian, Polish and Spanish. Radio stations play only classical music and folk songs, but Boone noticed records of pop-

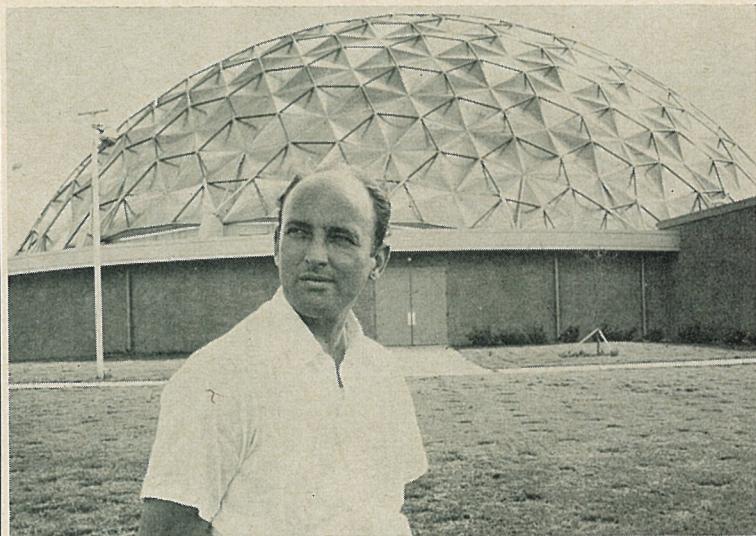
ular tunes on sale at music stands.

"Churches—Russian Orthodox, Baptist, Catholic, Jewish—appear well attended, though almost all churchgoers are 40 years or older," he noticed.

Autos are scarce in Moscow (gasoline is 45 cents a gallon) but the subway system is the

best Boone has ever seen. The average Moscow resident makes the equivalent of eight or nine dollars a day and most likely lives in a crowded apartment. Population of Moscow is five and a half million and there is a tremendous housing shortage.

"The people were most friendly," he added.



MOSCOW VISITED—Convair Fort Worth's E. J. Boone pauses in front of Casa Manana Theater, replica of which he helped build in Moscow earlier this year.

Interpreting South Sea Dances Specialty of Convair Girls Trio

"Sign language," based largely upon hand movements and an occasional hip flip, can be entertaining to "read." It can also be hard work.

A trio of Convair girls, stu-

dents of the art, can testify to the latter. For those who have seen them perform, the former needs little elaboration.

The women are interpretative dancers specializing in the dances of the South Sea islands.

Kamamalualoma (Lucky) Papke of Astro's Dept. 182, Tai Boyd of San Diego Division's Dept. 98, and Jeannie Cox, wife of Roger Cox of Dept. 214-3 at Astro, work either as a team or singly. Professionally they are known as "Aloma," "Tai," and "Leilani."

They have performed for over a year at clubs, private parties and a growing number of luaus in the San Diego area.

For "Aloma" and "Tai" the dances come naturally. Both were born in Hawaii and have danced as long as they can remember. Through the years they have added to their natural abilities through observation and study. For "Leilani" the story has been different. A native of Honduras, she was drawn to Spanish dances until she began studying under the other two.

"We make up our own routines as well as relying on traditional themes," Mrs. Papke said. "However, in each there is a story to tell of love or frustration or pursuit. This we convey by use of the hands."

"Hand movements, to the rhythm of the music, tell the story. We use hip movement merely to stay with the rhythm," she added.

Music is normally provided by guitars and drums with the dancers using rocks, gourds, hardwood sticks and bamboo sections to add effect.



SIGHTLY ARTISTS—These Convair girls, Kamamalualoma Papke, Jeannie Cox and Tai Boyd, perform South Sea Island dances as team and singly. Here they show costumes, bamboo sections, feathered gourds and hardwood sticks, used for effect.

Space Primer Sales Top 100,000, Definitely in Best Seller Class

Convair has never had a "best seller" quite like its Space Primer, a product of Astronautics' editorial section of communication department.

The 72-page booklet made its appearance in January of this year. The initial press run of 75,000 copies sold out in two months. In March a second run of 100,000 copies was made. Over half of these have been dispatched.

Space Primer is a concise, well-written introduction to the field of astronautics. It deals, in an easy-to-understand style, with such subjects as rocket propulsion, motion of satellites, ways in which man can reach the moon, etc. In addition, there is a simple glossary of rocket and space terms, a list of books and magazines on space and a section telling how to prepare for a career in astronautics.

While the booklet was aimed at the high school student, it has found popularity with all ages.

Thousands of grade school students have requested copies. So have many colleges and universities and such organizations as the National Geographic Society, General Intelligence Agency, Library of Congress, American Rocket Society and the

United States Information Service.

Astro has filled requests for copies from countries around the world.

Astro sells the booklet for 10 cents (slightly less than publication and distribution costs). It is available to employees through employee services outlets.



SWAMPED—Marie Trabbold of Astro communication department "digs out" of pile of Space Primers which have become a Convair "best seller." Requests have come from all over globe.

NEWS FROM OTHER DYNAMICS DIVISIONS

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair, Limited, of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., aircraft, missiles, and space systems.

Electric Boat of Groton, Conn., submarines.

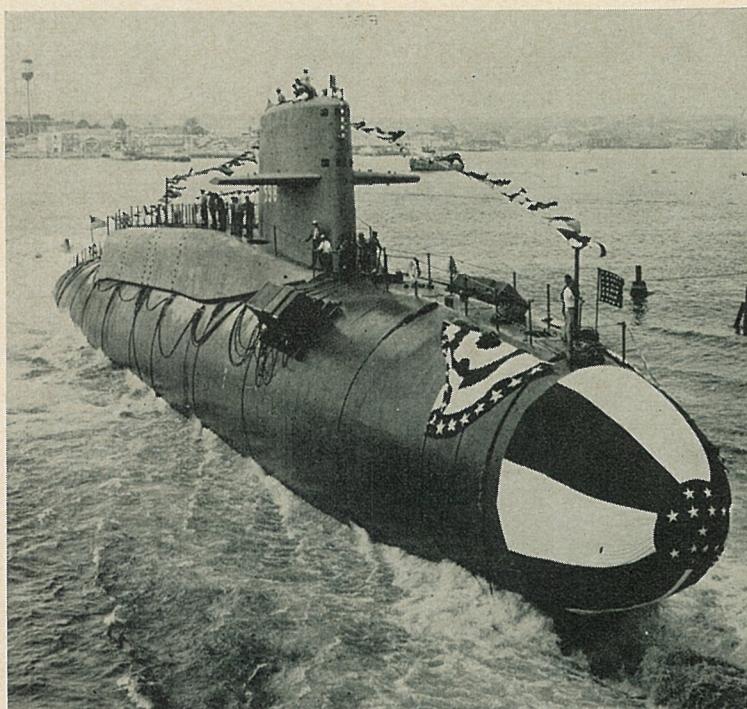
Stromberg-Carlson, of Rochester, N. Y., telecommunications, electronic equipment.

Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.

General Atomic of San Diego, Calif., nuclear research, development, production.

Electro Dynamic of Bayonne, N. J., electric motors, generators.

* * *



GEORGE WASHINGTON — First ballistic missile equipped atomic submarine, George Washington, splashed into Thames River this month. It was built by Electric Boat Division.

General Dynamics Enlarges Liquid Carbonic's Activities

NEW YORK—General Dynamics Corporation has acquired the industrial and medical gas business of the Hench Associated Gas Enterprises, Rex L. Nicholson, president of the Liquid Carbonic Division, announced last week.

Nicholson said that the acquisition of stock in the various companies comprising Enterprises involved "several million dollars" and was a cash transaction. He said that the Hench group is the strongest independent in the industrial and medical gas field.

Frank Pace Jr., chairman of

the board of General Dynamics, commented that acquisition represents another step in the corporation's planned program to achieve an approximate balance in defense and commercial profit margins.

The activities of the Hench Gas Enterprises cover most of the eastern seaboard from Maine to Florida and extend inland into Ohio. Principal products are oxygen, acetylene, argon, nitrogen, nitrous oxide, hydrogen, and welding equipment.

Nicholson said that the acquisition of these important facilities will enable Liquid Carbonic to become a more effective competitive factor in the industrial and medical gas business on a nationwide basis.

STROMBERG-CARLSON APPOINTS PIERCE

SAN DIEGO — Robert R. Pierce has been named purchasing agent for Stromberg-Carlson here, according to Dr. Donald G. Wilson, general manager.

Pierce will be responsible for all purchasing activities at the San Diego facility.

Keim Chief Engineer Military Products

ROCHESTER — Appointment of David Y. Keim as chief engineer — military products of the Electronics Division of Stromberg-Carlson has been announced by Kenneth M. Lord, division director of engineering.

Keim previously served as engineering department head for microwave and electronic equipment for the Sperry Gyroscope Co.



NAUTILUS—Frank Pace Jr., left, chairman of board of General Dynamics Corporation, presents scale model of Nautilus to Dr. Leonard Carmichael, secretary of Smithsonian Institute in Washington, D.C. Model will become permanent part of Naval History collections. Nautilus was built by Electric Boat Division.

CONVAIRITY

540 Scores in Fuel Economy

MONTREAL — Exceptionally good performance, fuel economy and serviceability of the Canadair-Convair 540 jet-prop airliner have been proved on a very successful one-month sales and demonstration tour of South American countries.

The tour included flight demonstrations at Bogota, Lima, Santiago, Buenos Aires, Porto Alegre, Sao Paulo, Rio de Janeiro and Caracas. One of the highlights was on May 31 when President Juscelino Kubitschek of Brazil was flown 575 miles from Rio to the new capital of Brasilia.

The 540 flew a total of about 19,000 miles of which 16,000 were point-to-point trips and the remainder local demonstration flights. Of the 95 flying hours, 72 hours 10 minutes were spent on point-to-point and route-proving trials, and 22 hours 50 minutes were taken up by local flights.

Favorable comment was made by pilots and passengers alike on the 540's extremely good performance in takeoff and climb, the low noise-level in the cabin and the almost complete lack of vibration from the two Napier Eland jet-prop engines.

F-102s Slated For ADC Shoot

Convair-built F-102As will join other Air Defense Command all-weather interceptors in weapon system evaluation at Tyndall AFB, Fla., this fall. The William Tell II operations will extend over ten days, Oct. 14-23.

F-106s, Convair SD's newest jet interceptors due to go into operation with ADC, will not take part in the maneuvers, although they will be on display and will make fly-bys during the show.

Flying high over the Gulf of Mexico Test Range, ADC interceptors will pit their skill against near-sonic targets before press, radio, and television representatives from across the country.

Targets will be jet-propelled radar-guided drones, one-fifteenth the size of a modern bomber, which can take evasive actions similar to those of attacking bombers. Radar operators on the ground will direct the planes toward the tiny targets flying at altitudes up to 50,000 ft.

Coggan Honored By Alma Mater

B. F. Coggan, Convair vice president and San Diego Division manager, received the first distinguished alumni award at recent commencement exercises of Michigan State University in East Lansing Mich.

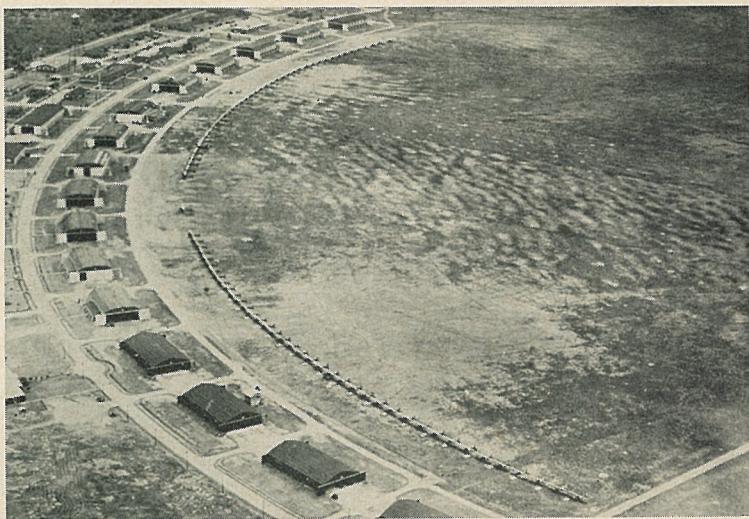
In presenting the award to Coggan, a graduate of the class of '39, Dr. John Hannah, president of MSU, said, "By your outstanding accomplishments in widely diversified fields you have reflected great honor upon your Alma Mater. In the name of Michigan State University, and all of its alumni, I present this award to you, and congratulate you upon being the first to be selected as having earned this special recognition from this great university of which you are a distinguished alumnus."

Prime Minister John G. Diefenbaker of Canada gave the commencement address for the 4,000 graduating seniors.

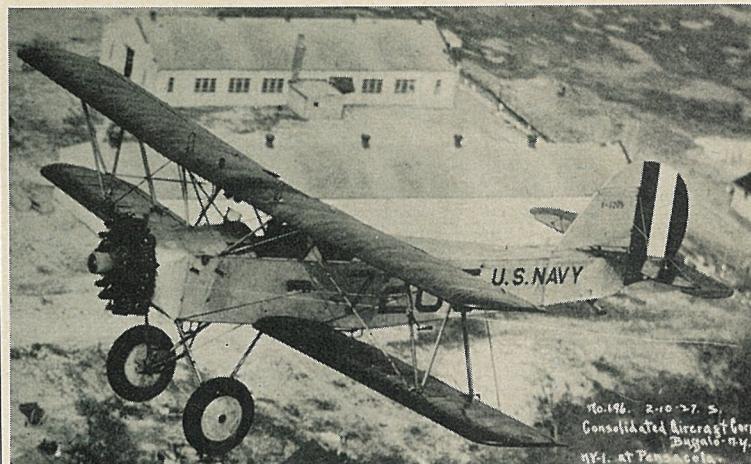
Convair SD, Astro Men Win Diplomas

Eight Convair SD and Astro men received their high school diplomas from the San Diego Evening High School at last week's commencement exercises.

San Diego Division employees graduating were Gerard E. Archaibault, Talmadge A. Burks, and Raymond E. Clapper; while from Astronautics were Jesse E. Bodine, Jerry L. Dehner, Donald C. Forbes, Leokadja Gutowski, and Ides Joseph Romero.



A BATCH OF PT-1s—On line at Brook Field, Texas, in winter of 1927 were 72 Consolidated PT-1 trainers. Building these as well as trainers for Navy put money in bank for Consolidated Aircraft.



AT PENSACOLA—Not only Army was customer for Consolidated trainers in '20s but Navy, too. Company consistently won Navy competitions. This Navy plane was pictured at Pensacola in 1927.

Consolidated Forced by Army To Build 50 PTs for \$1 Apiece

(This is No. 11 in continuing history of Convair, told in installments.)

It was in 1927 that the famous "Fifty Free Airplanes" incident took place.

Consolidated Aircraft had been doing a brisk and profitable business building trainers, profitable largely because of the foresight of the founder, Reuben H. Fleet. Confident that his trainer was the best and that the military would continue to buy, Fleet had gambled by ordering materials far in advance. He ordered enough to build 250 airplanes, even though at that time he did not have sales for them. The gamble paid off when the orders came in and the savings due to bulk orders of materials made possible a handsome profit.

By mid-1927 Consolidated showed a cumulative profit of \$867,000 on the service trainers it had built since 1923. The Air Corps* asked to see the company's books (a privilege not yet granted by law) and followed up with a demand for \$300,000 refund on excess profits.

Fleet and the directors felt the company had no alternative, since the services were their sole customer. Fleet negotiated one practical compromise which benefited customer and company alike, however. He pointed out that a \$300,000 payment would vanish into the general fund of the U.S. Treasury. Maj. Gen. Mason M. Patrick, Air Corps chief, agreed to "take it out in trade" by letting Consolidated build 50 trainers, currently priced at \$6,000 each, for a nominal charge of \$1 each.

The Navy declined to join the Air Corps either in seeking the settlement or accepting its proportion (26 per cent) of the plane refunds. RAdm. W. A. Moffett, Bureau of Aeronautics chief, replied to Patrick in a memorandum dated Aug. 3, 1927: "The records of the Navy Department covering its transactions with Consolidated Aircraft Corp. show that all procurements from it have been subjected to competition in accordance with law. . . . It is evident that potential competitors put forth their best efforts to obtain this business. . . . The Navy Department is not in a position to question the profits that the company may have made."

Fleet was still protesting the justice of the settlement seven years later. In a 1934 communication to the House Naval Affairs Subcommittee, dealing with proposed regulatory legislation, he recalled the incident and said: "We took the gamble, the government did not; we should, therefore, have been entitled to the resultant savings, which would have made our profit approximately 23 per cent. . . . In 1931 and 1932 our losses to the Army put the 'shoe on the other foot,' and it would seem fair that the Army should reimburse us"

Fleet's allusion was to losses totaling \$375,157 that Consolidated suffered on Army contracts in 1931-1932. Had he been addressing the subcommittee a few years later he could have cited another loss, this time on Navy business.

"Of the 49 flying boats we have built for the Navy," Fleet wrote RAdm. Ernest J. King in 1936, "our audited books show a total net loss of \$89,673.93, with sufficient profit on the 16 we built for others to enable us to keep going."

The "others" referred to commercial customers.

*The Army's aviation branch was born Aug. 1, 1907, as the Aeronautical Division of the Signal Corps. Name changes followed in this order: Aviation Section, Signal Corps (July 18, 1914); U.S. Army Air Service (May 20, 1918); U.S. Army Air Corps (July 2, 1926); U.S. Army Air Forces (June 20, 1941); U.S. Air Force (law signed July 26, 1947, with separation from Army effective Sept. 18 when W. Stuart Symington was sworn in as Air Force Secretary).

SD's Salvage Yard To Close on July 4

Salvage yard at Convair San Diego Plant 1 will be closed on the July 4 holiday, reminded R. H. Lange, material sales supervisor.

The yard at Gate 5 will be open for employee sales the following Saturday during the usual 8 a.m. to 1 p.m. hours.

Teen-Agers Trek Planned

Astronautics teen-agers will trek to the Jamul area via convoy July 11 for a special hayride under the sponsorship of the CRA women's activities.

Cars will depart from the west side of the Astro cafeteria at 6 p.m., returning at 11 p.m.

In the interim those attending will enjoy a long hayride over the back country, partake of barbecue sandwiches with drinks, then spend an hour or so dancing and taking part in various games.

All of this for the price of 75 cents per teen-ager.

Tickets are available only through Astro CRA, Bldg. 8, and must be purchased no later than July 3.

The affair is either stag or drag.

Parents desiring more information on the program—one of a series planned for the summer months—are invited to call Dixie Quesenberry, ext. 1113, at the Astro plant or Sally Prye at HU-8-9431 for details.

Some 40 teen-agers participated in a Presidio Park picnic June 13.

Astro and La Jolla Drivers to Compete

Although few will be able to pronounce it, many are expected to take part in a "Gnigzqued-neou," sports car event planned for the Astro parking lot July 11.

Participating will be the Astro Sports Car Club and guests from the La Jolla Sports Car Club. Starting time is 8 p.m.

Astro drivers have fared well in a number of recent events. Bill Rector, CRA commissioner, won first in the La Jolla Club's Autocross June 14, while George Kendall placed fifth. Rector and Mel Gordun took top spot in the Astro Club's "Scavenger Hunt." Second went to Dave and JoAnn Stephens.

Astro Film Society To Show 'La Strada'

"La Strada," grand prize winning film from the Venice International Film Festival, will be presented tonight (June 24) at 8 at the Marston Junior High auditorium in Clairemont by the Astro Film Society.

Co-feature will be a short on Marcel Marceau's pantomimes. Tickets, available at the door, are 75 cents each.

Four Astro Divers Compete at Catalina

Astro Divers paced all San Diego entries in the Pacific Coast AAU Spearfishing championship June 14 at Catalina, but failed to make the top three places to earn a berth in national finals.

Log Book Entries Service Emblems

ASTRONAUTICS
Service emblems due during the period June 16 through June 30.

Twenty-five-year: Dept. 700-0, L. L. Tuttle.

Twenty-year: Dept. 593-1, H. B. Steele.

Fifteen-year: Dept. 401, J. R. Rogers.

G. K. Smith; Dept. 532-6, R. R. Lutz.

Ten-year: Dept. 150-0, Edwin Miller.

SYCAMORE

Ten-year: Dept. 573-3, G. F. McDermott Jr.

Births

ASTRONAUTICS
ANDREWS—Daughter, Wendy Lee, 6 lbs., 11 oz., born April 8 to Mr. and Mrs. Harold Andrews, Dept. 532-1.

BANEL—Daughter, Wiktoria Janina, 6 lbs., 8 oz., born May 20 to Mr. and Mrs. Edward Banel, Dept. 270-2.

GUSA—Daughter, Gail Ann, 9 lbs., 13 oz., born June 9 to Mr. and Mrs. Howard Gusa, Dept. 532-1.

JONES—Son, Nicky Joe, 7 lbs., 2 oz., born to Mr. and Mrs. J. H. Jones, Dept. 571-2.

LABONVILLE—Son, Gerard Joseph, 7 lbs., 12 oz., born May 27 to Mr. and Mrs. Joseph Labonville, Dept. 270-1.

SCHNEEBECK—Daughter, Deborah Kay, 7 lbs., 8 oz., born April 22 to Mr. and Mrs. Dean Schneebek, Dept. 532-1.

Deaths

ASTRONAUTICS
LOWRY—Jack David, Dept. 211. Died June 9. Survived by wife, Mildred M., a daughter and two granddaughters.

PAMPERIN—Robert L., Dept. 549-7. Died June 14. Survived by wife, Carolen, 2 children, 10 and 6, and parents, Capt. and Mrs. L. S. Pamperin, USN ret.

CONVAIRITY



WATER BABY—Four-month-old Kathy Lou Denk isn't sure of king-sized bathtub her mother, Mrs. Kenneth Denk, is using. Mrs. Denk will teach "cradle set" while older Astro kids take CRA-sponsored swim course starting Friday. In lower picture children of D. K. Slingsbys, Herb Boyntons and John Bigleys are typical of older children taking lessons. Six-week program is slated for each Friday at Mission Valley School of Swimming.

Swim Classes Oversubscribed; CRA Arranges Another Series

Astronautics CRA this week did a quick re-scheduling job after requests for swimming less-

sons for youngsters in the 2nd through 6th grades far outnumbered class capacities.

One series of lessons opens Friday (June 26) morning at 9:30 and 11. However, these are filled.

Through arrangements made by CRA with the Mission Valley School of Swimming, two other classes have been scheduled. Each meets at 3 p.m. One starts June 30 and the other July 1. They will run on Tuesdays and Wednesdays for six weeks.

The classes are open to both boys and girls. Cost is \$6 each.

In addition, special swim facilities will be available without charge to youngsters over the age of two, but too young to enroll in the regular classes.

Donna Boynton at BR-3-5901 is accepting reservations from parents.

Russell Tops Berry For Astro Net Title

Gary Russell still reigns as top tennis champ at Convair Astronautics following a 6-4, 5-7, 6-1 victory over Tom Berry in the finals of the annual CRA spring tournament recently.

Ingrid Papich copped the women's bracket with a 6-0, 6-2 singles victory over Dorothy Johnson.

Russell and Flora Cannau bested the Berry-Johnson duo for the mixed doubles crown, 7-5, 7-5. The men's doubles was won by Dan Cendali and Barry Boehm in a 3-6, 6-4, 6-3 win over Russell and Larry Chambers.

SOFTBALL SOUGHT FOR SWING SHIFT

Second shift employees at Convair Astronautics interested in forming a CRA softball team for competition in the San Diego industrial swing shift loop are asked to contact Ray Mendoza, ext. 1111.

More Golf Lessons Begin July 14, 16

A second series of golf lessons at Mission Valley Country Club will be offered beginning July 14 and 16, according to Art King, golf commissioner.

Sessions will be held at 5 and 6 p.m. on Tuesdays and Thursdays for a period of six weeks. Total cost is \$10. Students must sign up with Astro's employee services section, Bldg. 8.

CRA Calendar

(Convair Astronautics Recreation Association has some 33 activities in operation. For information call CRA, ext. 1111.

ASTRO DIVERS — Meet Tuesday, July 7, 7:30 p.m. in the executive dining room.

ASTRONOMY CLUB — Meets July 1, 7:30 p.m. in the executive dining room.

CHESS CLUB — Meets July 2, 7:30 p.m. in the cafeteria.

FILM SOCIETY — Showing of "La Strada" and "Marcel Marceau's Pantomimes" June 24, 8:00 p.m. at Marston Junior High School Auditorium, Clairemont.

GOLF — Monthly sweepstakes for men, Flying Hills, July 11 and 12. Call Juanita, ext. 1158.

Hams to Drill In Field Sat.

Astronautics' Radio Club takes to the air Saturday (June 27) and Sunday along with thousands of other amateurs around the world for a two-day field event.

Operating with emergency power and transmitters set up in the CRA recreation area, the club (call letters W6UUS) will attempt to contact as many other units as possible, using less than 50 watts of power output.

Final plans will be mapped at regular club meeting at 7:30 p.m. tomorrow (June 25) at the Astro cafeteria and 1:15 a.m. June 26 (for second shifters) in the mockup room, Bldg. 5.

Ed Dodero, CRA commissioner and John Neal (second shift), are field day co-chairmen for the event.

Interested spectators and "hams" are invited to witness parts of the weekend action.

CHOPPERS LEADING IN TWILIGHT GOLF

Here are the standings in the Astro twilight golf league through seven of 13 weeks with team points in parentheses:

Snake Choppers (41); Chokers (40); Pronaters (38); 19th Holders (33); Divoteers (32); Big Spenders (30); Supporters (30); Guided Mussels (29); Sod Sockers (28); Greenhorns (26); Sandblasters (25); Flesh Peddlers (23); Punchers (20); Short Putts (20); Toppers (19); and Hackers (15).

In the other (Slicer's) section: Lox Drinkers (39); Mashers (37); Amazing Five (36); Divot Diggers (35); Orbiters (35); Fairways (32); Goof Balls (32); Bogeymen (30); Bunkers (28); Hogan Hotshots (28); Junior Varsity (26); Hunters (26); Fivewoods (26); Apogees (25); Squirts (21); Wedgemen (20); 9 Holders (18) and Knock Longers (10).

Golf Club Meeting Scheduled July 9

The second quarterly meeting of the Convair Golf Club July 9 will feature the installation of new club officers and the presentation of awards to winners of the championship tourney.

Cocktails from 6:30-7:30 will be followed by a smorgasbord dinner at the Admiral Kidd Officer's Club on Harbor Drive.

Tickets for the event go on sale today (June 24) and will be available until July 6.

Reservations can be made with the following: H. V. Purnell, ext. 1313, Astro; J. B. Kenney, ext. 695, Astro; G. L. Dix, ext. 631, Plant 2; J. J. Swarts, ext. 456, Plant 2; F. W. Kelly, ext. 2141, Plant 1; C. W. Maxfield, ext. 694, Plant 1, and K. W. Wulfemeyer, ext. 1705, Plant 1.

GOLFERS TO PLAY FLYING HILLS

Astro golfers will take to Flying Hills July 11 and 12 for a regular monthly sweepstakes event. Call Juanita, ext. 1158, for starting times.

Wednesday, June 24, 1959



WINSOME—Astronautics has at least two candidates for annual contest to select San Diego's Fiesta del Pacifico queen. At top is Kathryn Eddings, publications aide in Dept. 322-1. Bottom is Shirley Ann Kuhn, engineering secretary.

Bowlers Making Winter Plans

While Astro bowlers are just settling down to real competition in summer leagues, thought is already being turned to the organization of winter bowling, according to Commissioners Jack Boyle and Willard Brassell.

Based on participation in the past, Astro has already lined up the full 52 alleys available at Clairemont Bowl for several nights each week. In addition, CRA will sponsor leagues in Escondido, El Cajon, Lemon Grove and National City areas, if interest warrants.

Boyle and Brassell asked that departments interested in staging their own leagues begin to make plans, contacting CRA, ext. 1111, to signify their desires.

Organizational meetings will be held to arrange dates.

Chess Players Plan 'Quiet' July Fourth

Chess players traditionally seek peace and quiet when they go into action and Astro's chess legions are no exception.

Thus, the group's annual handicap tournament has been slated for July 3 and 4 at 1:30 p.m. each day.

Naturally, the bulk of Astro employees will be away enjoying a long weekend.

All chess players are invited to participate, according to CRA Commissioner Art Munson. Through a handicap system, all players will have an equal opportunity to garner one of the prizes.

Rockhounds Plan Picnic Next Month

Astro Rockhounds wound up their activities for the summer in June, but planned a family-type picnic for July 3 or 4 at a site yet to be picked.

Activities will resume in September. Meanwhile, several Astro rockhounds are working on exhibits for the Southern California Exposition at Del Mar.

'Beat Clock' Bowling For Swing Shifters

A novel "beat the clock" session has been added at Clairemont Bowl especially for swing shift Astro employees.

At 1:45 a.m. each Tuesday, Clairemont Bowl features a flat rate of \$1.50 for all the games a contestant can bowl within a one-hour period.

Two No-Hitters In Shop Loops

Mel Mills and Vic Salgado chalked up no-hit, no-run pitching performances in the Astro CRA shop softball leagues in the past two weeks.

Salgado's victims were from Dept. 537-0 and his feat accounted for Dept. 549-5's lone victory to date. Mills, a Dept. 591-5 hurler, turned in his blanking effort against Dept. 402 and helped his team remain among the top in the American loop.

The American was deadlocked with Dept. 591-5 and Dept. 573-0 tied with two wins each through the first of the fourth round. Dept. 402 was close behind with a single win.

Dept. 556-7 has won four straight in the National, while Dept. 220-6 grabbed two straight to rate second.

Astro's women's softball team blasted out a 22-14 victory over Ryan fems in the opening round of the industrial girl's league.

Industrial league competition found Astro's nine winning a forfeit over Convair Tool Manufacturing and an 8-0 victory over Ryan, while suffering a close 6-5 loss to Rohr.

Following is a schedule for games during the next two weeks:

NATIONAL LEAGUE

At Linda Vista:
June 25 6:45 p. m. Dept. 772-0 vs. 597-1
8:20 p. m. Dept. 556-7 vs. 220-6
June 26 6:45 p. m. Dept. 452-0 vs. 325-3
At Astro:
June 29 6:00 p. m. Dept. 220-6 vs. 578-3
June 30 6:00 p. m. Dept. 452-0 vs. 733-0
July 1 6:00 p. m. Dept. 220-5 vs. 597-1
July 2 6:00 p. m. Dept. 532-1 vs. 772-0
At Linda Vista:
July 7 6:45 p. m. Dept. 325-3 vs. 733-0
8:20 p. m. Dept. 220-6 vs. 597-1

AMERICAN LEAGUE

At Astro:
June 24 6:00 p. m. Dept. 591-5 vs. 775-0
June 25 6:00 p. m. Dept. 402 vs. 537-0
June 26 6:00 p. m. Dept. 573-0 vs. 591-3
At Linda Vista:
June 30 6:45 p. m. Dept. 597-3 vs. 537-0
8:20 p. m. Dept. 756-0 vs. 775-0
July 2 6:45 p. m. Dept. 573-0 vs. 591-3
At Astro:
July 6 6:00 p. m. Dept. 549-5 vs. 775-0
July 7 6:00 p. m. Dept. 597-3 vs. 591-5
July 8 6:00 p. m. Dept. 756-0 vs. 402

Astro Baseball Nine Off to Fast Start

Jerry Woods and his Astronautics teammates made it clear the CRA entry in summer baseball activities is going to be a team to beat by taking a 6-0 game from Kelsey-Jenney College.

For Woods, a right hander, it was a no-hit, no-run performance. He faced 29 batters, struck out 14 and walked only one man. Quick action by the Astro infield accounted for two double plays which erased two of the three men who reached the bases via errors. No runner reached second.

Astro plays each Sunday. Schedules are carried in local papers each Sunday morning.

Manager Frank White indicated this week experienced ball players may still make the team. Those interested may contact him at ext. 2351.

Discount Star-Light Opera Tickets Will Be Sold at Astro

Astronautics CRA has made arrangements for blocks of tickets to forthcoming Star-Light Opera performances which will be offered to employees on a reduced-price basis. Tickets will go on sale two weeks prior to each show.

Astro theater goers may purchase \$3 seats for \$2, and \$2.50 seats for \$1.60.

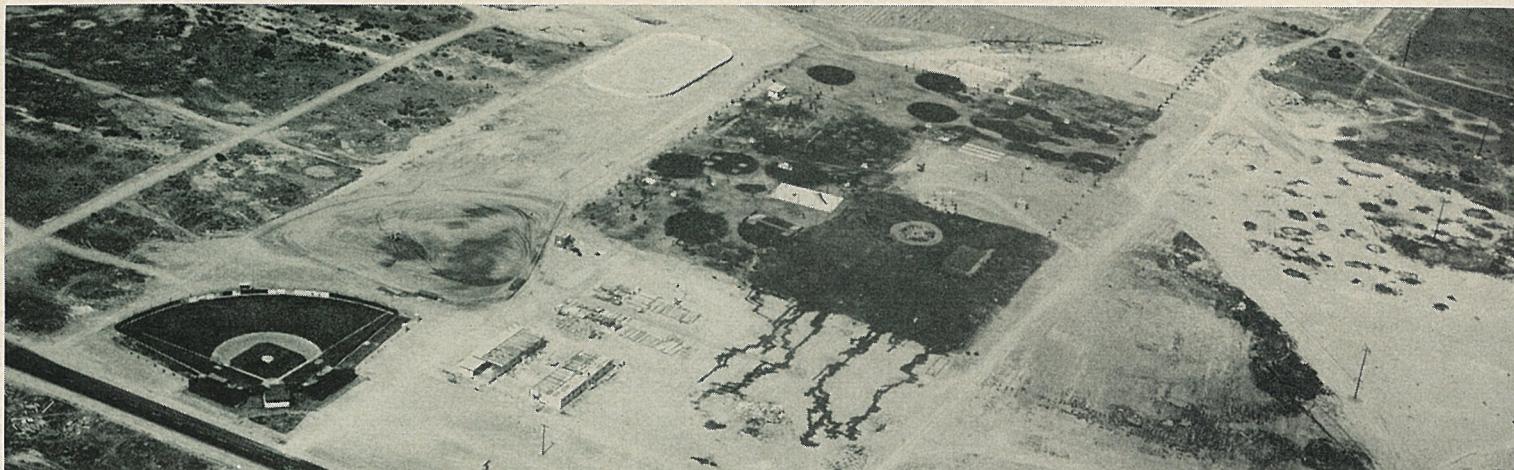
Astro will have ducats for all opening night performances and for the final performance of each show. Shows run Thursday through Sunday for two weeks.

However, CRA must return un-

Coronado Islands Divers' Destination

Astro Divers will gather at 7:30 p.m. July 7 in the Astro executive dining room to map final plans for a July 19 skin diving excursion to the Coronado Islands.

This featured July event will include both free diving and aqua lunging for spear fishing and sightseeing.



PROGRESS—Photographer Jack Stevens took this aerial shot of CRA area, familiar to thousands who have spent hours of volunteer work there. Little League park is easily identified at

left. Dark portions are grassed over and streaks are caused by grass sprouting where water trickled away. Tennis courts will be built soon near streaked area.



HI HO, HI HO!—Girls, very much a part of CRA recreation area development to date, will get added role in future. Plans call for enlisting all women employees into special work force. Typical are Bessie Wood, Helen Kress, Nelda Belik, Hy Edwards, and Alberta Doskocil, on their way with "weapons" shouldered.



MORE EFFIES—This group represents those on hand when over 80 CRA "Effies" were presented for work in CRA recreation area. Each has put in 20 hours or more working.

League of Champions' Turney Dominated by Astro Bowlers

Astronautics bowlers completely dominated the first annual Clairemont Bowl "League of Champions" tournaments held June 13-14.

First in the team competition went to Astro's "Tigers," win-

ners of the CRA plant tournament. Team members are Richard B. Williams, Joe Ragusa, Herman Brehmer, Billie Minnitti and Larry Brickel.

Williams' 235 won the high men's scratch game, while Ragusa fired a 250 for high men's handicap game. Joe Osborne turned in a 649 for first in the men's series handicap bracket.

Jennie Hynd won the women's series handicap with a 675 with Lorraine Berggren posting a 252 for high handicap game.

Trophies were garnered by each of the winners.



TROPHIES GALORE—Astro keglers held their annual awards dinner June 3 at Casper's Ranch. These comely champions were among 145 receiving trophies.

CRA Sports & Recreation Convairity

Girls Specially Invited To Help at New CRA Area

While the feminine element has been very much a part of the development of the new Astronautics CRA recreation area to date, it will assume an even greater role in the future, if present plans go through.

A group of Astro girls, headed by Bessie Wood of Dept. 100, has engaged in an all-out program to contact all women employees to enlist their help in the program. This has been accomplished mostly through individual contact in each department.

Those contacted are being told of the work in the area and of the need for help. Special emphasis is being placed on informing them of jobs women can perform, releasing male volunteers to accomplish other tasks.

"There is no back breaking work involved," Mrs. Wood said. "We are doing a number of jobs that had been performed before by men."

In this class are such as working in the tool shed, issuing tools to those turning out, or watering trees or maybe pulling grass and weeds around planted areas. Dur-

ing lunch breaks the girls take over serving those working in the area.

At present work parties take to the area east of the Astro plant on Saturdays and Sundays. Some special groups are taking advantage of the longer daylight hours to work after regular weekday shifts.

Women are asked to work no longer than four hours per day. They earn credit toward a CRA "Effie" the same as their male counterparts.

Those interested in the program who have not been contacted individually may call Mrs. Wood, ext. 1505, or Jean Bryan, ext. 1113, for further details.

Astro Doubles Card Sessions

Astro Bridge Club has stepped up its regular schedule for the summer months with competition once each week instead of twice a month, according to Bob Combs.

Play is now being held at 7:30 p.m. each Thursday at Barcelona Bridge Club, Fourth and Juniper.

About 50 players are on hand for regular sessions at present. They range from beginners through experienced players. Points are given toward ratings at each session.

Rates for play are much lower through the club and singles as well as partners are welcome, Combs said. Those interested are invited to turn out for the regular session or to contact Combs at ext. 1686 or Joan Shirley, ext. 2474, for additional information.

CRA Discount Tickets

The following discount tickets and items are available through employee services outlets:

ATLAS PINS—Replicas of Atlas missile in gold and silver, \$1.30 each.

B-58 PICTURES—Poster size color photographs, 25 cents.

BASEBALL—Discount tickets for July 1 and 15 games, available two days prior to game.

DISNEYLAND—Membership cards for discount purchases.

MARINELAND—Discount tickets.

ROLLER SKATING—Free tickets for July 20 session at Skateland.

SKATING DERBY—Special discount passes for each performance.

STAR-LIGHT OPERA—Reduced-price tickets available June 29 through July 7 for July 9 and 19 performances of "Li'l Abner."

SWIM NIGHT—Free tickets to July 18 session at Mission Beach Plunge.

TRIOLET—Half-price tickets to June 24 and 25 performances.

Quiet 'Nests' Prepared For 880 Passengers

Passengers aboard Convair 880s will be riding in "nests" of "cotton" padding when the jet transports go into actual service next year.

Over 1,000 pieces of fiber glass, of all shapes and sizes, are being tucked into the interior of each 880 to protect passengers from noise generated by engines and other of the plane's operating systems.

More than 600 different shapes of fiber glass batts wrapped and stitched into plastic fabric covers



880 "PADDING"—From left, Dorothy McEwen, Bee Farmer, and Mary Lou Samaron, all of Convair SD Dept. 138, fit fiber glass sound-proofing material into 11th forward fuselage section.

are clipped to the plane's frames and laced in with nylon cordings. The pieces range in thickness from one to four inches, and in size from six inches square to the large 14-ft. long by 20-in. wide pieces that are shaped to fit around each of the 88 windows.

The sound-proofing material is installed in each major section of the 880—the forward nose fuselage, tail, overwing barrel—as they are being built. Depts. 138, 139, and 146 are each responsible for the installation of each section's sound-proofing before they go into mating. The joints between the sections are sound proofed after mating by Dept. 148 in major mate.

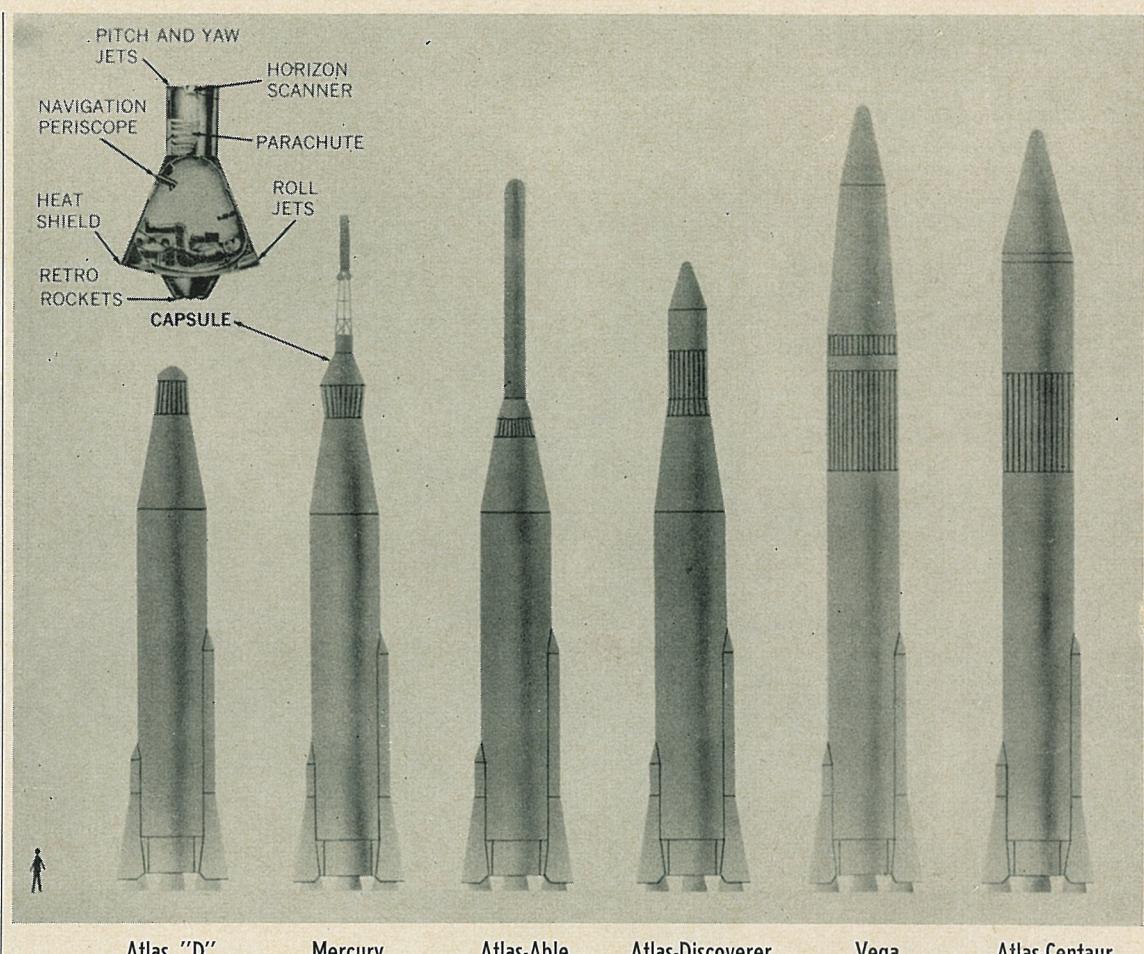
"We find, in our department, that women are better at fitting in the sound-proofing pieces than men," said C. M. Bradley, Dept. 138 foreman. "The girls are experts at installing the numerous shapes and sizes of batts and lacing them securely into the proper places."

Fiber glass pads are placed between the skin and any installations to go into the plane before the structural tie-ins are made. For instance, in the forward fuselage, specially-shaped batts are laced into locations to serve as backings for the radio rack, electric rack, flight engineer's panel, and underneath the cargo floor.

Four vendors supply the fiber glass sound-proofing material, cut to shape and fitted to Convair SD's specifications—H. I. Thompson Fiber Glass Co., Seaman Products, En-Fab Co., and Johns Manville Co. Any alterations made necessary by change in engineering design are made in Convair SD's tubing and fabric department.

CONVAIRIETY

Wednesday, June 24, 1959



Atlas, Space Age Wheelhorse, to Power Five Different Exploration Projects

A real "Sunday punch" in the field of space explorations is being readied by Convair in the form of five members of the Air Force Atlas "family" of space vehicles.

Each of these has been assigned a specific task. And each has a common trait in that the Atlas ICBM, now in production, provides the initial or booster power thrust to send it along its journey toward space.

Convair Astronautics, builder of the Atlas, is now at work on all five programs.

Actually, it can be said this Atlas family contains six members, rather than five. The Atlas has already proven its ability to boost itself into orbit without the use of additional rocket stages.

(Astro has outlined a proposed Project Outpost which would utilize this trait. An empty Atlas tank in orbit would be outfitted for living and working quarters for men who would conduct preliminary studies of life in space.)

There is little doubt that the Atlas is slated to become the wheelhorse of the early space age, due largely to its connection with the Convair family of space vehicles. At least four "firsts" are now slated for the Atlas space vehicles.

One first, quick to capture the imagination of all, is Project Mercury (Atlas/Mercury), the program to put the first manned U.S. satellite in orbit.

It consists of a capsule (McDonnell Aircraft) roughly conical in shape, approximately seven feet across the base and 10 feet high. Atlas will boost the capsule into orbit at an altitude of

100 to 150 miles for up to 24 hours. Retarding rockets and parachutes will enable the capsule to return to earth after that period.

Vega is a multi-stage rocket slated to become the first U.S. space vehicle in the "medium energy" class. Coupled with Atlas will be a second stage, also Convair-built; and a third stage provided by Jet Propulsion Laboratory. Vega will be able to put a 5,800-lb. weather satellite in orbit 300 miles above the earth or to send a half-ton payload to the moon. Vega also could put a 740-lb. experimental communication relay into the 22,000-mile or "24-hour" orbit.

Project Centaur (Atlas/Centaur) will become the first U.S. space vehicle in the "high energy" class.

As such it will be capable initially of putting five-ton payloads into satellite orbit or sending 2,000-lb. payloads to the moon. Centaur is made up of an Atlas, plus a Convair-built upper stage of the Atlas type. The upper stage uses the first U.S. liquid hydrogen rocket engine (Pratt & Whitney). If needed, a third stage (similar to Vega's) can be adapted for additional capabilities.

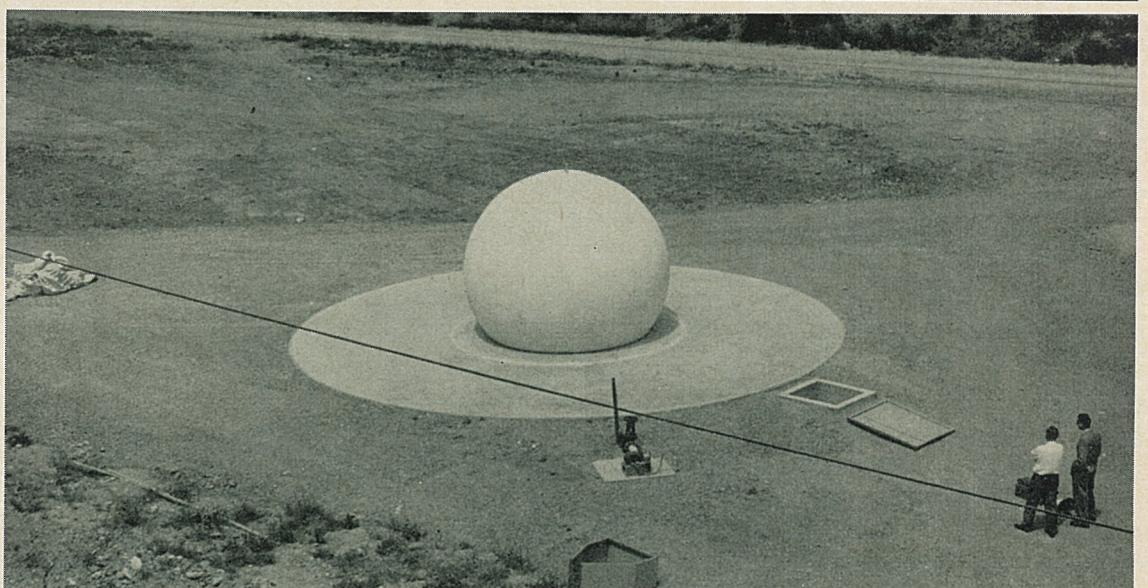
Project Discoverer (Atlas/Discoverer) will orbit instrumented payloads in polar orbit. It involves an Atlas booster, plus a second stage being built by Lockheed Aircraft.

Atlas/Able 4 consists of an Atlas booster, plus four additional stages to be fired into interplanetary space.

Atlas boosters for Vega and Centaur are being modified by building tankage sections a uniform 10 feet in diameter in lieu of tapered forward ends, as used with the ballistic missile.

Association to Hear SD Patent Attorney

Robert O. Richardson, Convair patent attorney, will address the San Diego Patent Law Association tomorrow night (June 25). With slides and recording tape as aids he will trace the history of a patent application through the U.S. Patent Office from rejection by the examiner and Board of Appeals to a favorable decision by the U.S. Court of Customs and Patent Appeals.



LISTENING POSTS—Huge 160-in. balloon-like radome, part of detection system being developed by Convair SD for Stromberg-Carlson, being inflated for testing. Convair San Diego men responsible for radome design are Dalton Bell and R. W. Quint of electronics section (Dept. 6-70).

'Balloon' Antenna Assemblies To Serve Detection System

Huge balloon-like objects are being tested by Convair SD electronics section as part of its responsibility in furnishing antenna assemblies for an Air Force detection system.

Convair San Diego is acting as subcontractor for its sister division of General Dynamics Corporation, Stromberg-Carlson, in the design and development of 15 assemblies for the Rome Air Development Center, Rome, N. Y. The project is known as GPERF (Ground Passive Electronic Reconnaissance Facility).

The assembly consists of antennas housed in air-inflated radomes which are bolted to steel towers. The large radomes, looking like flat-bottomed balloons, are made of dacron coated with Hypalon, a synthetic-type rubber sizing. They range in size from over 11 ft. to 44 ft. in diameter.

The towers and antennas are being built in the Convair SD plant while Muehleisen Mfg. Co. of San Diego is constructing the radomes.



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

Convairity

Vol. 12, No. 14

Wednesday, July 8, 1959

SAN DIEGO, POMONA, ANTELOPE VALLEY, VANDENBERG AFB, CALIF.

Two Air Force Officers Begin Year Training

Convair Astronautics last month welcomed aboard two new Air Force officers for a one-year "training with industry" program.

They are Capts. Raymond M. Finney and Konrad George.

In the year ahead (ending in June, 1960) the officers will spend time in each of Astro's departments and will visit various off-site bases on field trips. They are training at the management level in all phases of administration and production work. This program, a part of the Air Force Institute of Technology, allows top Air Force officers to learn from firms holding government contracts. Each of Convair's divisions participates.

Astro's educational services section coordinates their stay at Astro.

Captain Finney has been a commissioned officer for the past eight years. He came to Astro from Walker AFB, N.M., where he was production control officer for the 6th Bomb Wing. He is a graduate of the University of Colorado (B.S. in business administration, 1949) and the USAF Institute of Technology (M.S. in industrial administration, 1954).

Captain George has also served eight years in the commissioned officer ranks. He was chief of the Military Education Section, USAF Headquarters, Washington, D.C., for the past three years. He is a graduate of the University of Pennsylvania (BA in English, 1951) and the University of Indiana (M.B.A. in management, 1956).

Con-Trib Adds New Members

Two new members have been appointed to the Convair Astronautics Employees' Con-Trib-Club Committee, raising the membership in that group to 12.

J. J. Fromlath of Dept. 758 has become a representative of the United Welders Association. Dodge Dean of Dept. 130 is a new Convair representative.

The appointments required a special amendment of the Con-Trib-Club Articles of Association.

In addition to the new appointees, the committee now includes: Peggy Collier (Dept. 211) and Andy Doyle (Dept. 461) as representatives of the International Association of Machinists; W. J. Dawsey (Dept. 181) and L. W. Janson (Dept. 535) of the Engineers and Architects Association; M. L. Bjarstrom (Dept. 771) and I. B. Jenkins (Dept. 343) of the Management Club; C. A. Honeycombe (Dept. 250) of the International Brotherhood of Electrical Workers; D. H. McCoy (Dept. 521), Joe Frivaldsky (Dept. 130) and Dick Mitchell (Dept. 130) representing Convair.

Dr. Glenn Havens July 13 Speaker

Dr. Glenn G. Havens, chairman of the board of Narmco Industries, Inc., will speak before a July 13 meeting of the San Diego Industrial Development Council at Lafayette Hotel. The meeting is open to all Astro employees.

W. M. Del Grande of purchasing is executive secretary of the group and Sidney Albert of product support is vice president. Dinner reservations must be made by July 10 by calling Del Grande at HU-8-5008.



PROJECT AZTEC—State College forms fitting backdrop for this group directly responsible for unique engineering training program now in progress at Astro. From left are Bill Vulliet, Fred Sheats, Manville Pettys of State, Budd Love, Dr. Wilson Getsinger and Jim Lew. "Project Aztec" involves indoctrination of new engineers.

New Hire Engineers Get Special Indoctrination

Astronautics engineering functions this week begin to receive "graduates" of a unique educational program known as "Project Aztec."

The program, which began in early June and will continue through mid-September, is designed to give approximately 140 newly hired graduate engineers a thorough indoctrination and orientation. At the same time it will occupy these new employees while new quarters are being readied in the form of a two-story office building at Astro.

Exacting schedules have been set up to allow 20 new engineers to enter the program at once. They then participate for four weeks or 160 hours, "graduating" into actual assignments within engineering sections.

The initial class of 20 was slated to report to the Astro plant today (July 8). Subsequent groups will report at intervals well into September.

The name "Project Aztec" stems from the use of five lectu-

ture rooms and two drafting rooms at State College for some classes. Others are taught at the Astro plant.

Each student spends eight hours per day in class. Initially, sessions deal with various engineering subjects with special emphasis upon their application to current and future Astro projects.

Later, each student spends four hours each day for an eight-day period visiting the Astro plant for further lectures and visits to various factory and engineering functions. Also scheduled are trips to test sites at Point Loma and Sycamore Canyon.

Astro's educational services section is coordinating the program. Dr. J. Wilson Getsinger is the direct coordinator. Jim Lew is the engineering instructors' committee chairman. Four other engineers serve as instructors, while another 40 engineers and Astro officials fill in as guest lecturers during various phases of the program.



MOVING FAST—New Air Force officers assigned to Astronautics in training with industry program get brief tour of new office building under guidance of J. K. Davant, manager of industrial engineering. Officers are Capts. Raymond M. Finney and Konrad George.

Convair Response To Hospital Plea Praised by Naish

The "outstanding" response of Convair SD and Astronautics personnel to the Tri-Hospital appeal was praised this week by Convair President J. V. Naish and campaign officials.

"Every Convair employee in-plant drive a success is to be commended," Naish said. "As the first group to be solicited for funds in San Diego, much of the responsibility for the initial success of the drive rested with us. Your wholehearted support in meeting the challenge is gratifying.

"We have met the goal originally set for us," Naish added. "Total contributions from Convair San Diego and Astronautics are expected to total \$1½ million during the next three years."

Convair's "community spirit" was also praised by Milton F. Filius Jr., campaign chairman of the Tri-Hospital Fund Drive. He said that through the excellent support of Convair personnel "we have been given a standard and inspiration that cannot be overemphasized."

Filius was joined in his praise of the Convair pledges by Julian L. "Jack" Ashe, Grand Lodge representative of the International Association of Machinists, District 50.

"The program as conducted at Convair is a good example of the teamwork that can be accomplished through cooperative effort," Ashe said.

For the most part, active solicitation at Convair SD and Astronautics has halted. However, new employees and those who have been on vacation will be given an opportunity to sign up. Employee services at both SD and Astro will have tab cards available on request.

Latest figures, estimated over a three-year period, indicate that Astronautics will contribute \$625,246 to the hospital drive. Convair SD contributions are expected to total \$890,000.

The percentage of participation at Astro this week stands at 73 per cent; at Convair SD the figure is 65 per cent. Dick Mitchell, Astro campaign chairman, and J. K. Field, Convair SD campaign chairman, were optimistic that the figures would rise slightly as late returns continue to trickle in.

In-plant solicitation is now being conducted in other San Diego industries, including Rohr Aircraft Corp., Solar Aircraft Co., Narmco, Kin Tel and Cubic Corp.

A total of \$10½ million is being sought to add 442 beds and other hospital facilities to the city's three major voluntary hospitals—Mercy, Scripps and Sharp.

PLANT 1 REQUESTED TO EQUAL PLANT 2 BLOOD DONATIONS

All Plant 1 people on first shift at Convair San Diego will have a chance to sign up for the next bloodmobile visit scheduled for July 23.

Cards will be in the hands of supervisors by next Monday (July 13), said Ken Wulfemeyer of employee services, who urged Plant 1 donors to equal the record of Plant 2 at the last bloodmobile.

If as many pints of blood are collected this month as the 118 donated by Plant 2 on June 25, Convair SD's credit at the San Diego Blood Bank will be enough to carry through another month, said Wulfemeyer.

Astronautics

EDITION

Serving Astronautics' San Diego plant and facilities at AFMTC, Fla., and Vandenberg AFB, Calif.

Astro news office, Kearny Mesa plant, ext. 1154. Vandenberg news contact, ext. 8-4148. AFMTC news contact, ext. 3038.

AFMTC, CAPE CANAVERAL, FLA., FORT WORTH, TEX.

New Buildings To Ease Astro's Space Problem

Convair Astronautics has begun to occupy the second of three major expansion projects designed to provide more working space for a rapidly-expanding "population."

Now being pressed into use is Bldg. 26, a new structure located north of the factory building.

First equipment installations were made about June 29. Completion of installations and activation is due soon.

Over 100 employees will ultimately work there in the template shop, plastics and plaster shop, wood pattern shop and maintenance wood mill.

Areas vacated by these groups will be used in various ways. The former plastics and plaster shop will be taken over by manufacturing development and Dept. 756 (engineering test support); the former wood mill space will allow for expansion of garage facilities; and Bldg. 10, former home of the wood pattern shop, is slated for removal to a temporary storage area east of the factory building.

Already in use at Astro is a factory mezzanine expansion, which extended the original mezzanine from about the center of the factory building to the east wall in the high bay area.

Around July 25, Astronautics groups will begin to move into the new two-story office building (Bldg. 27) under construction on the west side of the reservation.

Once this move is started, it will continue on a seven day per week basis until approximately Sept. 1. In addition to employees moving into the new building (mostly engineering and product support), hundreds of others will begin shuffling about as other office areas are revamped, expanded and put into use.

Countess Will Tell War Experiences as Espionage Operator

Countess Maria Pulaski, a Polish noblewoman who was a World War II espionage agent for Great Britain, will be the featured speaker at the July 22 meeting of the Convair SD Management Club.

Members can obtain tickets for the affair through the usual departmental outlets. The program, sponsored by industrial relations, starts with a social hour at 5:30 p.m. in the Caribbean Room of the El Cortez Hotel.

Countess Pulaski, who is a resident of Chicago, is on the coast as a technical adviser for a film which will depict her life. She will recount her undercover activities for the Management Club audience.

Also on the program will be the presentation of the Mug of the Month and MacSave-it awards.



GRADUATION—Pauline Nates (Dept. 342 Astro) ranked in top ten of students who received certificates upon completion of basic manufacturing methods course sponsored by material office. Making presentation is T. J. Sullivan, SD assistant division manager.

110 Win Certificates on Completion Of Basic Mfg. Methods Course

A total of 110 from Convair SD and Astro June 17 received certificates upon successfully completing the basic manufacturing methods course. Presentations were made by T. J. Sullivan, Convair SD assistant division manager.

The course, designed to familiarize personnel with the different processes and methods employed in the manufacture of airframe components, is accredited by San Diego Junior College. It is sponsored by SD material department in conjunction with educational services.

Course instructor, R. W. Hardy, SD material services assistant supervisor, said the class, the third to take the course, was by far the largest, and brought the total for all three classes to 150.

Eighty-one of the certificate winners of June 17 completed both semesters of the course while 33 finished the second.

The course deals with raw materials, structures, unusual methods of manufacture such as chemical milling, Scotchweld bonding,

Over 100 Enrolled In Swim Classes

Almost 100 Convair Astronautics youngsters are now enrolled in swimming classes being conducted at Mission Valley School of Swimming under the sponsorship of the Astro Wives Club.

Present classes are filled.

However, the Wives Club is studying a program to offer additional classes later this summer.

as well as orthodox machine shop, sheet metal and safety procedure.

Hardy said the course would be held again in September.

\$13,000 Gifts OK'd By Con-Trib-Club

During June the Convair Astronautics Employees' Con-Trib-Club Committee has approved expenditures of funds totaling nearly \$13,000 to nine organizations on behalf of all Con-Trib members.

Included were grants to: Bay-side Social Center, \$1,250; Guadalupe Clinic, \$1,350; San Miguel Hospital Building Fund, \$5,000; Boys and Girls Aid, \$1,200; Girls Club of National City, \$1,200; San Diego City-County Camp, \$100; Girl Scouts of San Diego County, \$350; Palomar Hospital, \$1,500; and Community Welfare Council, \$1,000.

Bryant Joins Astro As Aide to Young

Elwood D. Bryant, a veteran aircraft industry engineer and administrator, has joined Convair Astronautics as assistant to W. L. Young, operations manager.

Bryant has been director of engineering at Fairchild Engine Division of Fairchild Engine and Airplane Co. His previous experience also includes 12 years with Curtiss-Wright Corp.

A native of Maine, Bryant holds a mechanical engineering degree from the University of Maine.

CONVAIRITY

Astro Singers Get Opera Roles

A pair of Astronautics employees and an Astro wife have been tabbed for starring roles in forthcoming Star-Light Opera performances in Balboa Park.

And Astro families may enjoy their performances, as well as others, at special bargain rates made available through CRA.

Kelman Aiken, chief of support supply, will star as Enoch Snow in the production of "Carousel" opening July 23. This is a repeat role for Aiken who starred in the original presentation in 1952.

Leslie Cozzens of engineering sings the leading male role in "Naughty Marietta," while Kathy



ENOCH SNOW — Kelman Aiken, chief of support supply at Astro, will appear as lead in Star-Light Opera presentation of "Carousel." Leslie Cozzens of Astro and Kathy Profitt, an Astro wife, have also been tabbed for starring roles this summer.

Profitt, wife of Jim Profitt of engineering, heads the feminine cast as Carrie Pepperidge. This show opens Aug. 20.

Astro CRA has obtained blocks of tickets for opening and closing performances of all shows which are being offered to employees in a special one-third-off arrangement. Reduced prices are \$2 for regular \$3 tickets, and \$1.60 for \$2.50 seats.

Tickets will be available approximately two weeks in advance of each show. However, CRA must return unsold tickets two days prior to each performance.

Is It News? Call Convairity



THE WINNERS—June Management Club event at Astro was both beginning and end. It was end of regular activities until after summer and beginning of duty for new slate of officers, shown standing above during swearing in ceremony. Meetings resume in September.

Convairity

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations. General Offices, San Diego, Calif., Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Grace Fath, Helen Pemberton, Fred Bettiner.

Astronautics Editorial Offices, Bldg. 2, new plant, ext. 1154. Staff: Bryan Weickersheimer, news editor.

FW Editorial Offices, Col. 73C, ext. 2961. Mailing address: Convairity, Convair, Fort Worth, Texas. Telephone PErshing 8-7311. Staff: Bob Vollmer, news editor; H. A. "Pat" Baker Jr., Mary Beck.

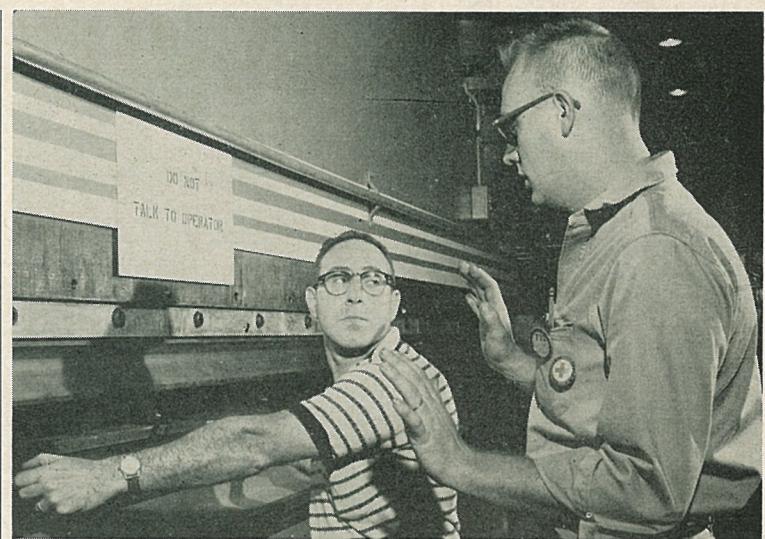
Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Offices, Room 31, Bldg. 301B, Palmdale, ext. 337. Staff: Betty Lou Nash.

Openings Exist in Wives Club Bowling

There are some openings for Astronautics wives and daughters in a special Monday morning (10:30) bowling league at Bowlero under the sponsorship of the Astro Wives Club.

Vacations, plus low initial participation, have left some of the three-man teams short of keglers. Interested parties may report to Bowlero at the regular time or contact Barbara Mahaffey at BR-7-5094 for details.



WHOA THERE, BUB—Safety committeemen are present in record numbers at Astro and always on job. This posed shot shows Committeeman Bob Szymczak cautioning Al Aymar who is breaking several safety rules in operating brake press. Can you spot them?

Astro's Plant Safety Committee Reaches Record 180 Membership

Convair Astronautics now has a record 180-member Workmen's Safety Committee, more committeemen per employees than any other Convair division.

These men and women, hand-picked by supervision for the job, represent all of Astro's manufacturing and test units. Included are all local San Diego Astro operations at Point Loma, Plant 2, etc.

The current committee, like those before it, serves for a period of four months. Its key function is to provide supervision with alert and ready help in spotting potential safety hazards, enforcing safety rules, and in convincing fellow employees of the value of safe working practices.

Added emphasis is being placed upon the present group by Astro's constantly expanding employment. Many new employees are entering the factory each week. Some are taking up a type of work for the first time. Thus, safety committeemen must be alert to help them adjust to new conditions.

Each safety committeeman receives special instruction in a series of one-hour class sessions held monthly. Instruction includes filmed reports and graphic demonstrations conducted by Astro's fire department, etc.

Astro's safety committee is headed at present by H. W. Anderson, a Dept. 731 foreman.

"Without reservations, the members of the present committee are among the top employees at Astronautics," Anderson said. "Their willingness to help and their alert attention to details is outstanding."

Jack Garrison, chief safety engineer at Astro, is also high in his praise of those who wear the safety committeeman's badge. He indicated that help offered supervision in safety matters has been largely responsible for safety laurels won to date.

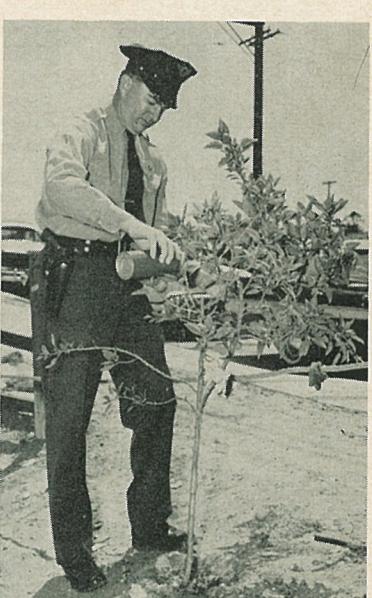
(Astro last year placed third in the nation among all airframe manufacturers in safety, exceeded only by Convair's Pomona and San Diego Divisions.)

Tool Engineers Meet July 14

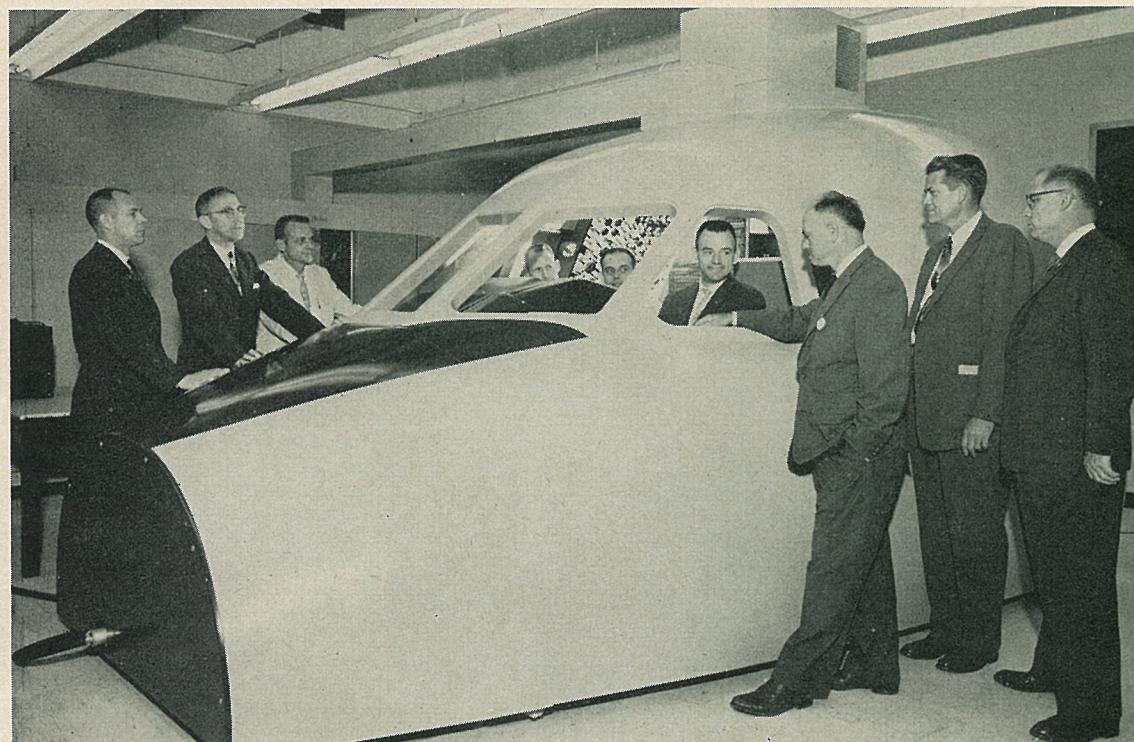
A program of interest to all Convair SD tool engineers will be given at the July 14 meeting of the San Diego chapter of American Society of Tool Engineers.

"High Temperature Sandwich Structure," will be the topic of William Walters, tool project engineer of Rohr Aircraft Corp. at the dinner meeting to be held at Aztec Cafe, 2696 Balboa St., Pacific Beach. Dinner will be at 7 p.m. with the technical meeting at 8.

Earl Williams of SD-Dept. 603-6, chairman of the San Diego chapter, reminds all Convair people interested in attending to make reservations before next Monday (July 13). Price of the dinner is \$2.75 for members and \$3 for non-members. For further information call Williams, ext. 778, Plant 2.



NAMELESS — Convair SD guard, David Davis Jr., waters unidentified "tree" guards are tending at Sassafras St. parking lot.



FIRST "GRADUATES"—Grouped around cockpit procedures trainer at Convair SD are TWA personnel, first customer class to complete Convair 880 training course in preparation for delivery of first plane this fall. Left to right are G. A. Hibbeler, E. S. Gooch, J. R. Mueller, M. S. Antes, J. J. Harris, J. B. Buckmaster, C. L. Johnson, Convair SD production flight engineer-instructor, H. C. Claxton, and W. W. Williams. D. M. Crowley, manager TWA ground school, was not present.

New Harness, Ejection Seat For B-58 Tested

A new harness for the B-58 Hustler ejection seat was due back at Convair Fort Worth this month after exhaustive tests at Philadelphia Naval Yard.

Principal feature of the refined and improved seat is a harness of straps which holds a crewman's arms, legs and body firm as he ejects from the aircraft.

Another new device automatically holds the crew member's head steady during ejection.

The suit is believed to be the first in the industry to incorporate the new type rigging.

It was tested in the Air Crew Equipment Laboratory in Philadelphia as another step toward an improved escape system for B-58 crews.

Harness previously had been tested in actual flight four times. This was from the aft seat of an F-94 flown in test flights by Wright Air Development Command.

Further tests will be at Convair Fort Worth and the Air Force's Hurricane Supersonic Research Site sled track in Utah, according to J. E. Hickok, project test engineer.

The seat features a rocket catapult as well as the new type harness.

"The rocket catapult system is a significant improvement over the present ballistic type," said Tino Sierra, project design engineer.

"The rocket catapult ejects the crew member up—and then forward. It also sends the crewman higher to assure safe clearance of the aircraft, and improves safety in low altitude ejections."

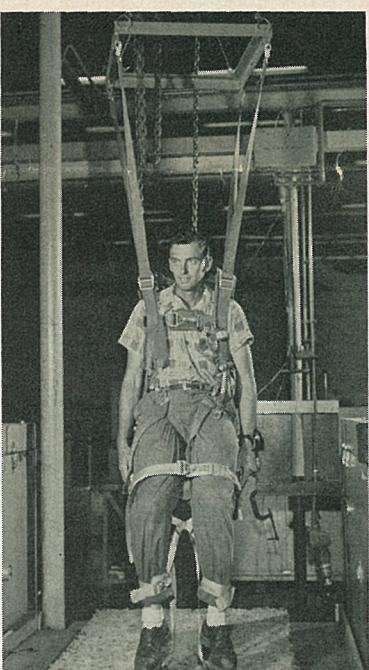
At all times while crew members are in the B-58, they'll be "hooked up" to the new harness. The harness, in turn, is attached to a survival kit fastened to the parachute.

To eject, the crew member pulls on seat hand grips to ready the harness for ejection. He then needs only to squeeze one trigger. Milliseconds later the rocket motor fires up and the man is riding a "flying seat."

At a safe distance from the aircraft, the lap belt opens, the seat falls away and the parachute automatically opens—if the pilot is below 15,000 feet. If above that altitude, a special device

checks opening of the parachute until the crew member free falls to 15,000 feet.

Development of the new seat is the prime responsibility of the furnishings design group in engineering which reports to Max Martin. Flight test and engineering test lab personnel are responsible for testing.



IN HARNESS—Floyd Foreman, Dept. 36, demonstrates position B-58 crewmen would be in while descending in parachute.



CHECK-OUT—J. E. Hickok, seated, and R. L. Roper, both Dept. 6-7, check out leg restraints and other equipment on new type B-58 ejection seat.

Nine From TWA Get 880 Course

Nine TWA training personnel, who will indoctrinate TWA flight crews, flight engineers, and pilots in operation of the Convair 880 jet transport, have completed the first customer training course given by production flight department at Convair SD.

The five-week course, which ended July 2, covered general familiarization, systems operations, flight characteristics, and aircraft performance, said P. H. Selby, flight training supervisor.

Included in the intensive course was ten hours per man in the 880 cockpit procedures trainer. "All of our first 'students' expressed themselves as greatly impressed with the value of the trainer," said Selby.

Part of the group, together with several TWA performance engineers, are remaining at Convair SD this week to make up a class of ten for a one-week performance engineering course given by SD aerodynamics group.

Convair men, all production flight engineer-instructors, presenting 880 material are C. L. Johnson, who teaches instruments, electronics, electrical; L. J. Rice, fire detection and extinguishing, fuel systems, power plant; W. B. Van Houten, airplane general, flight controls, emergency equipment; C. J. Falkenthal, hydraulic and adverse weather systems, air conditioning and pressurization; L. M. Norton, aircraft performance and flight characteristics. L. W. Hughes is training coordinator.

Novel Shock Absorbers Protect 'Passengers' in Simulated 880 Crashes

A giant "swing" has been tossing passenger seats of the Convair 880 through the air with crash landing force.

"But the dummies in the seats during tests are absorbing only what would result in a headache for a human," said A. R. Vollmecke, assistant group engineer in charge of dynamic tests of 880 passenger seats.

Results showed that the 880 seat backs will crush before passenger injury could occur, explained Vollmecke, easing the effect of rapid deceleration.

Seats for the 880 jet transport, being made by National Seating Co. of Mansville, Ohio, will be of an improved ductile sheet metal design. The material yields enough to allow impact to spread over a large area.

Rubber and steel dummies, weighing 170 lbs. each, have been belted into seats made to production specifications by Convair SD experimental department. Seats, fastened to a large platform, were dropped via a pendulum attached to the ceiling of the structures test lab at the SD seaplane ramp. Forces simulated those of a crash landing. In static tests the seats were put under down loads which would be experienced in an extremely hard landing.

An accelerometer measured the force with which the dummies hit the seat backs at time of impact.

"Early indications of the head impact test program are that the seat back design for the 880 is even safer than that used in the Convair-Liner 340 and 440, which was recognized as a standard of safety throughout the aircraft industry," remarked H. A. Mellinger of the 880 project office.

Under test along with the seats are the seat energy absorbers developed by Mellinger and George Hendry (Dept. 6-5). Attached to

Robert Smith Shifts to GO

Robert F. Smith, chief of educational services at Convair Astronautics since October, 1958, has joined the General Office staff as an assistant to R. H. Biron, Convair vice president-administration.

He replaces M. G. Burland who has left the company.

Pending selection of a replacement at Astro, Smith will continue to direct educational services activities at that division.

Smith has spent most of his life in Southern California. He attended grade and high schools in San Diego and received degrees from the University of Southern California (B.A. and B.S.) and UCLA (M.B.A.).

Prior to joining Convair last year, Smith served the Air Force and various private businesses as a consultant on management development and other educational matters. He was also an administrator in UCLA's Institute of Industrial Relations and had been supervisor in employee relations for Ryan Aeronautical Co.

Convair FW Visited By Graduate Nurses

Fourteen graduate nurses working toward bachelor of science degrees in nursing at TCU and Harris Hospital got a glimpse of industrial medicine in action recently when they toured Convair Fort Worth's medical facilities.

Dr. J. K. Leverett, chief physician, and Margaret V. Crouch, head nurse, hosted the nurses and took them on a tour of the plant's dispensary and to one of the assembly line first aid stations.

ASTRO MAN NOW CALIF. GUARD MAJOR

William Hedrick of Astronautics' engineering was recently promoted to the rank of major in the California Army National Guard. Hedrick is radar officer of the 114th Anti-Aircraft Artillery Brigade at Camp Elliott.

the seat belts the energy absorbers are designed to reduce loads two and three times over short periods of time by absorbing the crash impact force.

Object of the Convair-developed units is to keep the loads in any emergency situation below 9g (force equal to nine times the combined passenger-seat weight), maximum load under which seats are required to endure on the 880.

The seat energy absorbers are to be in use only when needed—that is by reducing short interval high forces in the range of 15 and 20g to the relatively safe levels between 7 and 9g, said Mellinger.

"The only way to keep passengers safe is to keep them in the seats and the seats firmly attached to the plane," he emphasized. "The energy absorbers will disperse forces which, otherwise, might rip seats from their moorings and toss occupants about."

Both the dynamic head impact tests and static tests have been conducted under conditions required by FAA for certification by structures lab personnel headed by W. E. Wise, group engineer. Crash energy absorption tests were part of the Convair SD research and development program beyond FAA requirements.

"Our goal is to provide 880 passengers with the very safest seat it is within our power to construct," Mellinger concluded.



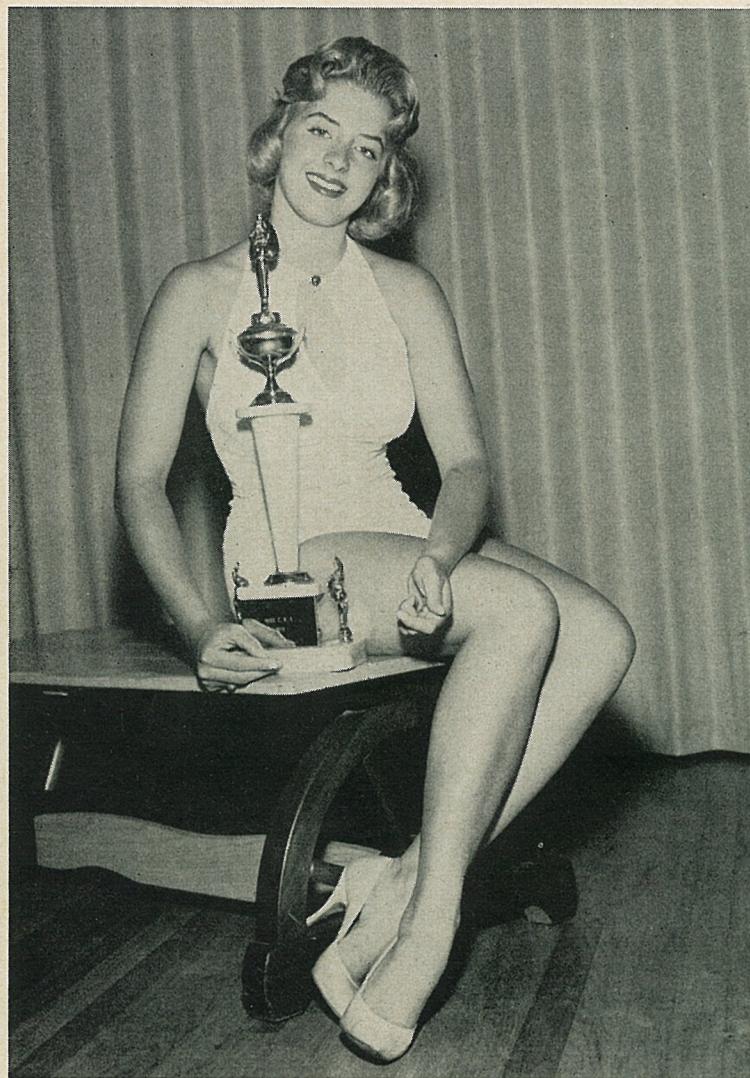
"CRASH" LANDING—Rubber and steel dummies take beating as they undergo simulated crash landings to test safety features of Convair 880 passenger seats. Upper shot shows "passengers" in seats bolted to platform before being swung pendulum fashion in recent dynamic tests.

Reliability Section In Operation at FW

Quality control reliability activities at Convair Fort Worth are now being handled by the newly created Dept. 27-7.

The new section, under supervision of D. W. Ascherin, is administratively responsible for the collection, analysis and reporting of reliability data on B-58 subsystems.

Growing emphasis being placed on reliability necessitated formation of the new section.



LOVELY—Holley Susens, 17, daughter of Convair FW's William Susens, was crowned "Miss CRA Health Club" recently. She is senior at Amon Carter Riverside High and top English student and drum majorette.

Convair Nomenclature Changed For Internal Communications

A number of changes in nomenclature to be used in Convair internal communication were announced last month in Convair Notice No. 81.

These changes will be incorporated into all practices, notices and manuals, as revisions are being made. However, for the present the titles themselves of Division Standard Practices and other presently named existing manuals will not be changed. An exception will be the Convair Management Manual, which will now be called the "Convair Supervisory Manual."

Changes listed are:

"Corporation" or "Corporate" will be used to refer to General Dynamics Corporation. The term "company" will not be used in referring to either Convair or General Dynamics Corporation.

"General Offices" (or "Convair-General Offices") will be used to refer to Convair's top management offices.

"Operating division" will be used to refer to any one of the

five major operating facilities of Convair.

Position titles in internal communications will refer to titles of Convair positions, unless otherwise specified.

"Convair (or General Offices) Executive" and "Convair (or General Offices) Staff Executive" will be used to identify personnel having titles as defined in CSP 10-2.

"Manager" will be used to refer to the manager or Convair Executive in charge of an operating division, e.g., "Vice President and Manager Convair-Pomona," etc.

As mentioned above, "Convair Supervisory Manual" will refer to the booklet formerly known as the "Convair Management Manual."

"Convair Notice" will refer to Convair's system of announcements at the General Offices level.

At the operating division level, Convair's system of announcements (formerly "Division Notices") will be titled as follows: "Convair-Pomona Notice," etc.

"Division Standard Practice" will continue to be used to refer to Convair's standard practice system at the operating division level. At a time at each operating division when it is practical to convert the titles of DSPs to operating division Standard Practices, the titles to be used will be: "Convair-Pomona Standard Practices," etc.

Other Convair manuals containing the words "Corporate" or "Division" in the title will be converted by using "Convair" at the General Offices level and "Convair-Pomona," etc., respectively, at the operating division level. This conversion will be made as these manuals are revised under normal procedures.

The phrase "among (or between) operating divisions" will be used instead of "inter-division."

The phrase "within Convair" will be used instead of "intra-company."

The phrase "within Convair-Pomona," etc., will be used instead of "intra-division."

Instructions concerning nomenclature to be used in external communications will be issued at a later date, the Convair Notice stated.

Crash Rescue Talks Popular

J. A. Hitch, Convair SD technical representative at George AFB, Calif., is responsible for introduction of a program on crash rescue which is proving popular with civic and military groups in the area.

So far he has given the talks to 16 organizations, including fire departments, local and state police, California and U.S. Forestry Service, George AFB, Nellis AFB, March AFB, and Marine Corps Base at Barstow. Other groups are asking for similar programs.

Points covered are normal entry into the F-102A cockpit, emergency entry, release of pilot from seat belt, removal of pilot to prevent personal injury, general layout of the F-102A with emphasis on fuel location and armament, chemicals for use in aircraft fires, best approach to aircraft for fire trucks and personnel.

Accompanying Hitch on his presentations have been personnel of the 329th Fighter-Interceptor Squadron.

Cataloging of Divisions' Resources Seen as Step in Overall Reliability

Reliability requirements for weapon systems will have a far-reaching effect throughout General Dynamics Corporation, Dr. A. M. Small of Convair San Diego told representatives at a recent corporate reliability panel at Stromberg-Carlson in Rochester.

Dr. Small, staff specialist in engineering, gave a synopsis on reliability specification contents, then led an open discussion of what must be done.

Convair Fort Worth's J. Y. McClure, manager of quality control and chairman of the panel, discussed the reliability resources manual.

He pointed out that cataloging all corporation resources by division will help in handling overall reliability programs. This will show special capabilities of

each division and make it possible for one division to call upon another for help.

Progress in Convair Fort



RELIABILITY—Studying agenda for reliability panel meeting recently in Rochester are: left to right, J. Y. McClure, Convair FW, panel chairman; John J. Riordan, of Office of Assistant Secretary of Defense; L. B. Richardson, senior vice president of General Dynamics.

Worth's reliability program was reported by Dr. N. H. Simpson, chief of reliability programming. He told of the B-58 program, the approach to the problem and gave results with illustrative charts.

Qualification testing was discussed by Convair Pomona's T. A. Vogel who emphasized that Convair's work in this field is advanced.

An "interchange of data" plan was proposed by Vogel. He pointed out that test results could be exchanged among divisions.

Others on the program included Canadair's A. B. Oxley, G. R. Hauser of Convair Fort Worth, H. F. Eppenstein of Convair Astronautics, L. B. Richardson, senior vice president of engineering for General Dynamics Corporation, and R. G. Schimpf, chief engineer, Micronics Division, Elgin Watch Co.

Also, D. R. Archibald of Convair Astronautics, S. M. Truex, office of maintenance engineering and Assistant Secretary of Defense, and J. J. Riordan, staff director for inspection and quality control, office of the Assistant Secretary of Defense.

Other Convair Fort Worth people attending were J. M. Murphy of the electronics design group and J. L. Coburn, chief of reliability vendor coordination.

Next panel meeting will be in September at Astronautics.

All Different

'Old School' Caps Are Various Among Nurses at Convair SD

Only two of the 20 nurses who watch over Convair San Diego people are entitled to sport the same type of perky headgear.

Nineteen different styles of caps, ranging from fluffy organdy to tailored stiffly-starched linen, some with large points, small points, black velvet stripes, are worn by Convair SD's efficient corps of nurses.

Designating the school from which each girl has been graduated, the only two who finished from the same hospital—and thereby wear the same kind of caps—are Jeanette George at Plant 1 and Ida Hunt at Plant 2. They both took their training from Ancker Memorial Hospital School of Nursing at St. Paul, Minn.

"Our nurses have come to us from 14 different states, from Washington to Florida and from California to New York," said Frances Collier, head nurse who is a graduate of St. Mary's Hospital School of Nursing, Kansas City, Mo.

"And, though they have been trained by as many different schools as there are nurses, every one of ours is extremely well qualified for the specialized industrial work. The same high standards of nursing are maintained at Convair as at any hospital with the same code of ethics observed," she continued.

In fact, as Mrs. Collier pointed out, nurses at Convair SD must have a diversified training to be able to handle the different types of work required including X-ray, laboratory work, physiotherapy,

physical exams for hazardous work, in addition to first aid in emergency cases.

Besides Mrs. Collier, nine nurses are assigned to SD Plant 1 while seven are at Plant 2, and two stationed at Rose Canyon. One, Georgette Horton, divides her time between Plant 1 and Plant 2 on the third shift.

Dorothy Chesler, assistant head nurse, has been at Convair SD the longest consecutive period of time, having joined the company in July, 1942. Mrs. Collier also has been with Convair SD since 1942 but has not been here the entire time.

Atlas Missile Goes to Paris

A 52-ton Atlas missile recently crossed the Atlantic for the first time to make its European debut at an air show June 12-21 in Paris.

Dismantled into major sections, the Atlas was flown to Europe aboard a giant C-133 cargo plane, departing from Westover AFB, Mass. and arriving at Le Bourget Airport in Paris.

The huge intercontinental ballistic missile was part of a U. S. Air Force display at the 23rd annual International Air Show in Paris. Thirteen nations, including the Soviet Union, had exhibits.

The same Atlas has also appeared in exhibitions in Dallas and Las Vegas. It has been modified to allow visitors to walk inside the base.



CAPPED CIRCLE—Clockwise, Convair SD nurses, Jeanette George, Evelyn Carson, Dorothy Scriven, Helen Werdeman, Olga Fort, and (in center) Frances Collier, show different styles of nurse's caps, each representing a different school for universal identification. Nineteen schools are represented by Convair SD nurses.

NEWS FROM OTHER DIVISIONS OF GENERAL DYNAMICS CORP.

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair, Limited of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., aircraft, missiles and space systems.
Electric Boat of Groton, Conn., submarines.
Stromberg-Carlson, of Rochester, N. Y., telecommunications, electronic equipment.
Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.
General Atomic of San Diego, Calif., nuclear research, development, production.
Electro Dynamic of Bayonne, N. J., electric motors, generators.

Electronic Printing To Become Popular

SAN DIEGO—New electronic printing systems for high-speed registered printing of computer data on pre-printed forms have been announced by Stromberg-Carlson here.

S-C 5200 Systems print numbers, letters or symbols at speeds up to 5,000 lines per minute on pre-printed forms. Stromberg-Carlson sees their widespread use by financial institutions, insurance companies, government agencies and manufacturing firms for large-volume processing of such business forms as invoices, checks, statements, premium notices and inventory records.

Material Service Corporation To Become Dynamics Division

NEW YORK—The boards of directors of General Dynamics Corporation and Material Service Corporation announced last week unanimous approval of the merger of their respective companies. The proposal provides that General Dynamics' acquisition of Material Service Corporation will be financed through an exchange of stock. Share owners of both corporations will be asked to approve the merger at special meetings.

Material Service, one of the nation's largest producers of building materials, concrete products

and coal, will become a major division of General Dynamics. Henry Crown, present chairman of the board of Material Service, will continue as chairman of the new division.

According to Frank Pace Jr., board chairman of Dynamics, the merger of these two organizations, one primarily in defense, the other entirely in commercial business, offers vital advantages of long-term growth and development for both. Pace also said "the interest and activities of the Crown family in Material Service Corporation will be maintained. The policies and program relating to personnel and the conduct of the business which have contributed so much to its success and growth will be continued."

Pace pointed out that Dynamics is engaged in a long-term program to supplement its defense business with expanding commercial businesses. The corporation's ultimate objective is to achieve an approximate balance of defense and commercial earnings. The merger with Material Service represents a long step in that direction, he said.

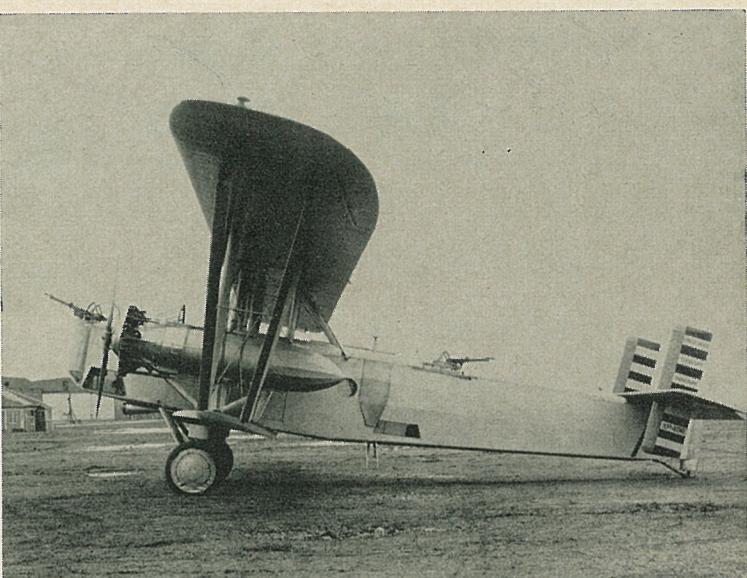
Material Service was started in 1919 by Henry Crown, Irving Crown and the late S. R. Crown. For 1958 net sales were \$114 million.

Electronic Aids Will Cut Size Of Subs' Crews

GROTON—General Dynamics Corporation's Electric Boat Division has been selected by the Office of Naval Research to serve as manager of an industry-Navy team working on a submarine integrated control system (SUBIC) that may permit manpower reduction on atomic powered submarines from the present average 100-man crew to 12 men.

Target date for placing the integrated control system in a nuclear submarine is 1964 and the project promises to be of importance in both small "killer" (anti-submarine) submarines and the larger ballistic missile-firing subs.

Primary purpose of the program is to increase the operational and combat effectiveness of submarines. The SUBIC scientists are attempting to create a balanced man-machine partnership that will utilize electronic sensing and data-processing equipment to permit up-to-the-minute tracking of contacts and provide information necessary for precise navigation and weapons firing. A television-type visual display of information will enable the submarine commander to make prompt decisions. In effect the skipper will have an "electronic porthole" to "see" his subsurface environment, similar to a pilot looking through an aircraft windshield. These features, originally developed for the aircraft instrumentation program, are logically adaptable to the latest atomic subs which feature one-man airplane type control. The single-stick submarine system was recently tested in the high-speed A-sub Skipjack which General Dynamics delivered to the Navy on April 15.



AN ALSO RAN—This was Consolidated Sikorsky Guardian, built for Army bomber design contest in 1927 but withdrawn at last minute as not coming up to specifications. Consolidated collaborated with Sikorsky Manufacturing Co. on this project with latter building the plane at Long Island plant.

Army Engineer Laddon Joins Consolidated Air

(This is 12th installment of a continuing history of Consolidated Aircraft Company, which ultimately grew into Convair Division of General Dynamics Corporation.)

From the standpoint of avid and sustained public interest, American aviation enjoyed its golden age in the closing years of the 20s. A flourishing air traffic developed in Europe after the war, but at home the average American remained apathetic toward flying in all its aspects.

This changed swiftly when a young air mail pilot, Charles A. Lindbergh, fired the nation's imagination with a solo flight from New York to Paris on May 21, 1927. From about that time the great aviation boom was on.

This climate was made to order for the prospering Consolidated Aircraft Co. which had determined to expand into the commercial market as well as heavier military aircraft. Attention centered at first on the fruitless design of a bomber. However, the end result was a new family of flying boats that were to dominate U.S. naval aviation for a decade, and incidentally spur creation of the country's first international seaplane line.

President Reuben Fleet's opening move was to employ one of the Army's foremost civilian engineers. This was I. M. Laddon, who joined the Engineering Division of the Air Service in 1917 and was made chief of Design Branch 2 (heavy aircraft) at McCook Field in 1919. Among his accomplishments were the GAX attack plane of 1919, and the all-metal CO-1 of 1921. When the Army stopped building prototypes he turned to designing details and was awarded patents in 1923-27 on aerodynamic, structural and equipment developments. The Bendix-Laddon disc

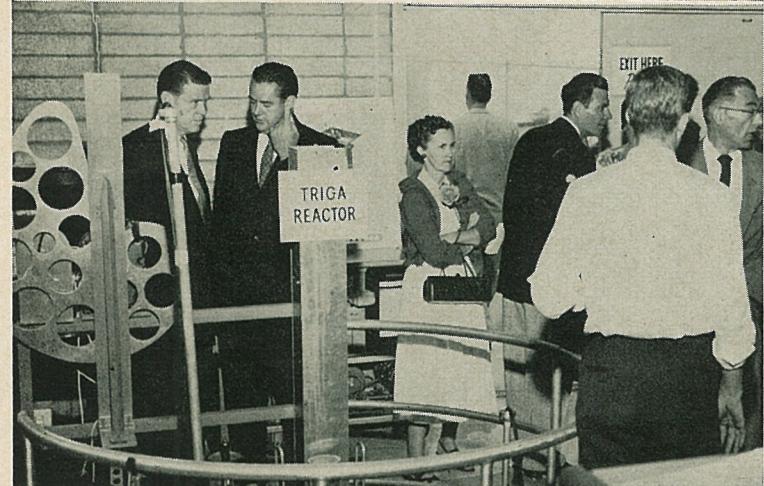
The bomber was completed in Sikorsky's Long Island plant late in 1927. Its wing span was 100 feet and power plants were 525 hp. Pratt & Whitney Hornets. When wheeled out for its maiden flight the plane bore the legend "Consolidated Sikorsky Guardian" on its red and white tail surfaces. Consolidated pilot Leigh Wade, a veteran Army flyer and later (1928-1933) a vice president of Consolidated, was at the controls.

After a series of tests, however, Consolidated decided the plane fell short of specifications and withdrew from the design contest. It was too late to cancel

press releases and advertisements that described the Guardian as a joint product of the two companies. The Army bomber contract eventually went to the Curtiss B-2 Condor.



30 YEARS AFTER—I. M. Laddon, Army's foremost aviation designer when he joined Consolidated in 1927, is shown here (right) receiving his 30-year pin from Frank Pace Jr., chairman of General Dynamics Corporation board.



FOR RESEARCH—In top photo are some of key persons at dedication of \$10 million John Jay Hopkins Laboratory for Pure and Applied Science in San Diego. From left, Dr. Frederic de Hoffmann, head of General Atomic Division; Frank Pace Jr., chairman of General Dynamics board; Mrs. John Jay Hopkins, for whose late husband laboratory is named; and Prof. Niels Bohr of Denmark, Nobel Prize winning nuclear physicist, who was chief speaker. Below, at far left, is Earl D. Johnson, General Dynamics president.

Reactor's Power Tapped For Dedication of Lab

SAN DIEGO—General Atomic's TRIGA research reactor was "flashed" to a peak power level of 1,500,000 kilowatts—a new record for atomic reactors—in the climax to the dedication of the John Jay Hopkins Laboratory for Pure and Applied Science last month.

Dr. Frederic de Hoffmann, president of General Atomic Division, described the "flashing" to the audience as an impulse received from the TRIGA reactor serving to unveil the laboratory's dedication plaque.

The TRIGA prototype reactor, located at the north end of the laboratory, increased its power output from one watt to 1,500,000 kilowatts (thermal) in less than one-tenth of a second. The actual flash lasted approximately 15-thousandths of a second. Sci-

entific personnel could safely stay within a few feet of the top of the tank during the flash. The self-regulating feature of the TRIGA reactor's unique fuel-moderator elements of uranium-zirconium hydride immediately reduced the power to normal operating levels.

This peak flash of a million-and-a-half kilowatts is a new record for the energy level attained by any nuclear reactor in controlled operation, exceeding a previous recorded high of 530,000 kilowatts achieved by the Atomic Energy Commission's kinetic experiment on water boilers (KEWB) in a test conducted April, 1958. To have produced a similar burst of instantaneous energy by electrical means would have taken the entire generating capacity serving San Diego.

CRA Discount Tickets, Items On Sale at Employee Services

The following discount tickets and items are available through employee services outlets:

ASTRONAUTICS DECALS — Emblems suitable for home or car windows, 10 cents.

ATLAS PINS — Replicas of Atlas missile in gold or silver, \$1.30 each. Pinettes in enamel, 60 cents.

ATLAS PICTURES — Poster size color photographs, 25 cents each.

B-58 PICTURES — Poster size color photographs, 25 cents.

BASEBALL — Padres discount tickets for July 15 and 22 games, available two days prior to games.

DISNEYLAND — Membership cards for discount purchases of tickets at Disneyland.

MARINELAND — Discount tickets, adults \$1.75, children 50 cents.

ROLLER SKATING — Free tickets for July 20 session at Skateland.

SKATING DERBY — Special discount passes for each performance, Thursday through Sunday.

SPACE PRIMER — An introduction to astronautics, 10 cents.

STAR-LIGHT OPERA — Reduced-price tickets available July 8 through 21 for "Carousel," July 23 and August 2 performances.

SWIM NIGHT — Free tickets to July 18 session at Mission Beach Plunge, available July 15.

Nancy Tatum Rolls 255 Scratch Game

Nancy Tatum of Dept. 220, one of Astro's top women bowlers, turned in a commendable 255 scratch game to cop high singles honors in the San Diego 600 Club tournament held recently.

Only 57 local women have registered sanctioned 600s or over in three-game series to become eligible for membership in these exclusive ranks.

Log Book Entries

Promotions

ASTRONAUTICS

Promotions to or within supervision effective June 8.

Dept. 193-3, Industrial Accounting: To timekeeping asst. supervisor, P. Waier.

Dept. 451-0, Jigs & Fixtures: To asst. foreman, A. Roberts.

Dept. 775-0, Trainer Assembly: To asst. foreman, R. H. De Wald, R. A. Jacobs.

Effective June 22.

Dept. 182-0, Facilities Control: To facilities red. asst. supervisor, T. J. Bevers.

Dept. 214-1, Stores & Traffic: To receiving & stores asst. foreman, F. Leribes.

Dept. 250-9, Plant Engineering: To asst. foreman, E. S. Johnson.

Dept. 280-4, Inspection: To inspection asst. supervisor, O. F. Kennan.

Dept. 321-6, Support Engineering: To service engineering asst. supervisor, J. H. Stroessler.

Dept. 341-2, Support Supply: To receiving & stores asst. foreman, V. L. Carter. To shipping asst. foreman, J. J. O'Shea. To traffic asst. supervisor, A. S. Rader.

Dept. 343-1, Support Manufacturing Control: To support tooling asst. supervisor, M. Aker.

Dept. 732-0, Sheet Metal: To asst. foreman, C. F. Davis.

Dept. 758-0, Major Assembly: To foreman, J. E. Merk.

AFMTC

Effective June 8.

Dept. 571-1, Test Operations: To asst. flight test group engineer, O. H. Reed. Effective June 22.

Dept. 571-3, Operations Support: To asst. foreman, E. L. Hayes, L. E. Wallace.

Dept. 571-8, Material & Manufacturing Control: To material control asst. supervisor, J. P. Nichols.

SYCAMORE

Effective June 22.

Dept. 573-8, Operations Support: To asst. foreman, R. A. Bada, G. R. Thomas.

VANDENBERG

Effective June 22.

Dept. 576-1, Engineering: To asst. test conductor, J. L. Johnson.

Dept. 576-3, Material: To asst. foreman, J. Cook, R. S. Verner.

Dept. 576-4, Inspection: To inspection asst. supervisor, V. C. Cardiel Jr., M. R. Wilson.

Dept. 576-6, Administrative Support: To manufacturing control foreman, G. L. Dahle.

WARREN

Effective June 22.

Dept. 351-1, Convair Operations: To design group engineer, H. S. Jensen.

Service Emblems

ASTRONAUTICS

Service emblems due during the period July 1 through July 15.

Fifteen-year: Dept. 150-0, C. W. Niebrugge; Dept. 756-0, Hugo Tilling; Dept. 758-0, M. F. Gabriel; Dept. 771, O. J. Sonsteng (due May 6, 1959).

Ten-year: Dept. 130, Mary R. Leiker; W. L. Frye; Dept. 150-0, J. W. Jolliffe; Dept. 211, J. A. Deming, R. T. Gaughen; Dept. 220-1, Evelyn S. Schadek; Dept. 401-0, M. J. Boeckel; Dept. 461-0, Beulah H. Rowlison; Dept. 775-0, R. H. De Wald.

WARREN

Ten-year: Dept. 351-3, J. E. Kay.

Personals

ASTRONAUTICS

I wish to express my thanks to all Convair Astronautics and San Diego friends who were so kind and thoughtful during the illness and passing of my husband, Jack Lowry, Dept. 211. Billie Lowry, Dept. 192 SD

The family of George MacLean, Dept. 603-1 SD, offers heartfelt appreciation to Convair friends at Astronautics, Vandenberg AFB and San Diego Plants 1 and 2, for the expressions of sympathy and floral tributes.

Mrs. W. K. Selton
George F. MacLean
Jack E. MacLean

Our sincere gratitude to the many kind friends at Convair Astronautics for your generous help, lovely cards, letters and flowers during our recent bereavement.

Mrs. George Fitzgerald

and children.

The many friends and fellow workers of Robert L. Pamperin at AFMTC, Fla., would like to express their deep sympathy to his family. Bob was a frequent visitor and true friend to most of us here. We shall miss him greatly.

Dept. 571 Employees

Births

BIRTHS

GOLEM—Son, Randy, 7 lbs., 8 oz., born May 11 to Mr. and Mrs. Richard A. Golcm, Dept. 452.

HUGHES—Son, Andre Burnett, 7 lbs., 3 oz., born June 12 to Mr. and Mrs. Burnett Hughes, Dept. 351-1.

JACQUA—Daughter, 7 lbs., 10 oz., born June 12 to Mr. and Mrs. Tom Jacqua, Dept. 576-2.

KEITHLEY—Son, Scott Allen, 7 lbs., 7 1/2 oz., born May 11 to Mr. and Mrs. M. C. (Keith) Keithley, Dept. 130-6.

MAU—Son, David Lee, 8 lbs., 1 oz., born June 11 to Mr. and Mrs. Alex Mau, Dept. 576-1.

RUPE—Son, Paul Anthony, 10 lbs., 8 oz., born May 5 to Mr. and Mrs. Jachare Rupe, Dept. 576-3.

As winner, Astro takes over a plaque.

Golf Commissioner Art King indicated this week interest in the competition was so great, study is now being made of a possible sweepstakes event involving the three divisions in the near future.

Astro golfers tour Flying Hills July 11 and 12. Juanita at ext. 1748 will accept starting times through tomorrow (July 9).

Bridge Players Plan New Point Series

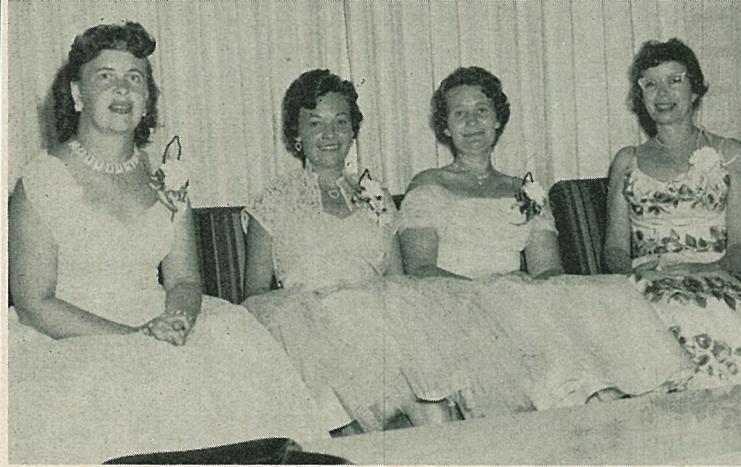
A novel accumulative point series running from July 9 through Aug. 27 is being set up for those participating in Astro Bridge Club's weekly sessions.

Additional master points are also planned for players, based on their best six games during eight weeks, according to Bob Combs, director.

The Bridge Club meetings are held at 7:30 p.m. every Thursday at the Barcelona Hotel, 4th and Juniper. All Astro families are invited to participate.



ASTRO WIVES—Among many activities conducted by Astro Wives Club is monthly luncheon. This was made at June event. Dixie Husted, Wives Club president, is at far left. Other activities include bowling, golf, events for children.



LEADING WIVES—These officers were installed recently by Astro AMR Wives Club in Florida. From left are: Mrs. Leslie Cole, treasurer; Mrs. Kenneth Clopton, vice president; Mrs. Charles Jackman, president; and Mrs. James Rice, secretary.

Minnite in Finals Of Bowl Tourney

Astronautics' Tony Minnite (Dept. 545) got off to a slow start then turned on the steam June 27 to gain a finals berth in the Victory Lanes championship singles tournament slated for the past weekend.

Minnite rolled 169 and 156 games before finding the range for 221, 255 and 206 games and a total of 1,097 pins.

Parmley's 67 Paces Linksmen

Dick Parmley, a one-stroke handicapper, fired a blistering three-under-par 67 to pace Astro's 16-man team to victory in the inter-division team golf matches held June 28 at Circle R.

Astro wound up the second of two matches with a total of 2,022 strokes, bettering a 2,057 total for San Diego (winner last year) and a 2,085 total posted by Pomona linksmen.

As winner, Astro takes over a plaque.

Golf Commissioner Art King indicated this week interest in the competition was so great, study is now being made of a possible sweepstakes event involving the three divisions in the near future.

Astro golfers tour Flying Hills July 11 and 12. Juanita at ext. 1748 will accept starting times through tomorrow (July 9).

Pistol Teams Finish High

Astro pistol teams placed second and fourth in the annual San Diego Industrial Recreation Council matches held June 28, Commissioner Bill Geopfart reports.

The team composed of Geopfart, David Reichenbacher, Russ Oliver and Ken Bunker took second place behind Convair SD.

Top aggregate scores have earned berths on the third-quarter Astro pistol team for Ed Maiers, Geopfart, Reichenbacher, Oliver and Bunker.

A regular meeting is slated for the July 12 matches at the Police Range, Geopfart added.

Regular June totals found Russ Oliver winning the .45 matches, with Ken Houghtby and Maiers trailing in that order.

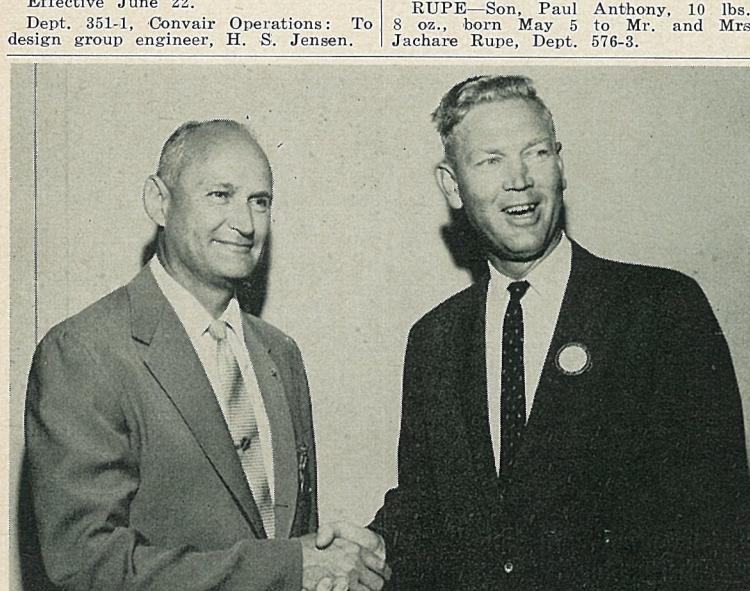
Don Stamp Wins Net In Golf at AFMTC

Don Stamp won low net honors among 80 participants in a June 27-28 golf sweepstakes event held among AFMTC employees at Melbourne Country Club.

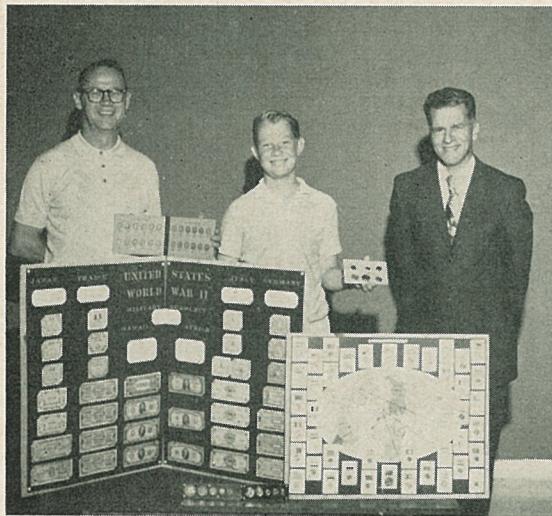
Walt Anderson paced the gross shooters with an even-par 72.



HAPPY EVENT—June meeting of Astronautics Management Club featured presentations of first club scholarships. Winners are shown on bottom row with parents. Runners-up, with parents, are on second row. Club's scholarship committee occupies top step.



QUARTER CENTURY—Latest Astro man to complete 25 years of service is L. L. (Larry) Tuttle, superintendent of major assembly and engineering test support. He receives congratulations from J. R. Dempsey, Astro manager, (at right).



ALWAYS SEEKING—Astro Coineers are always on lookout for new coins and members. At left are Theron and Sam Scott and Ray Toy with displays entered in Del Mar Fair. Same holds true for picture at right with Esperance Talmage, Joe



Garside and Rogene Owens with wooden nickels. Center shot shows gathering at last meeting, one of best to date. More than 30 are on regular Coineers roster, ranging from youngsters to granddads. Photos by Larry Tuttle, Astrolens.



Loop Leading Dept. 591-5 Lone Undefeated Team

Shop league softball teams at Astro rounded third for home this month with only about three weeks of play remaining in the two loops.

Through games played June 29, the picture shaped up as a chase in the American League, with all teams trying to knock off Dept. 591-5, the lone undefeated team with five straight wins. Similar circumstances prevail in the National where Dept. 556-7 has won six straight.

Dept. 578-3 aided the latter's cause last week by handing Dept. 220-6 its lone defeat in a 14-6 encounter.

The American finds Dept. 573-0 ranging close behind Dept. 591-5 with four wins and a loss. Two teams, Depts. 549-5 and 537-0, have won three and lost two.

The National also has a pack nipping away at the leader. In addition to Dept. 220-6, Depts. 532-1 and 733-0 had lost only one

game while winning four. Astro's Industrial "A" League team won three and lost two in the first round of play that found Rohr out front. The second half is under way.

Meanwhile, the varsity baseball team dropped a 7-4 game to Ryan to record a two-win, one-loss mark through late June.

Following is a schedule for games during the next two weeks:

NATIONAL LEAGUE

At Linda Vista:

July 9 6:45 p.m. Dept. 452-0 vs. 772-0
8:20 p.m. Dept. 220-6 vs. 532-1

July 10 6:45 p.m. Dept. 556-7 vs. 578-3
8:20 p.m. 325-3 vs. 220-5

At Astro:

July 13 6:00 p.m. Dept. 556-7 vs. 733-0
14 6:00 p.m. 578-3 vs. 597-1

15 6:00 p.m. 325-3 vs. 772-0
16 6:00 p.m. 220-6 vs. 532-1
17 6:00 p.m. 452-0 vs. 220-5

At Linda Vista:

July 21 6:45 p.m. Dept. 220-6 vs. 452-0
8:20 p.m. 556-7 vs. 597-1

23 6:45 p.m. 733-0 vs. 772-0
8:20 p.m. 578-3 vs. 532-1

24 6:45 p.m. 325-3 vs. 220-5

AMERICAN LEAGUE

At Astro:

July 9 6:00 p.m. Dept. 573-0 vs. 537-0

At Linda Vista:

July 14 6:45 p.m. Dept. 591-3 vs. 537-0
8:20 p.m. 549-5 vs. 402

16 6:45 p.m. 573-0 vs. 591-5
8:20 p.m. 756-0 vs. 597-3

At Astro:

July 20 6:00 p.m. Dept. 775-0 vs. 402

21 6:00 p.m. 591-3 vs. 591-5

22 6:00 p.m. 549-5 vs. 597-3

23 6:00 p.m. 573-0 vs. 756-0

AMERICAN LEAGUE

At Astro:

July 9 6:00 p.m. Dept. 573-0 vs. 537-0

At Linda Vista:

July 14 6:45 p.m. Dept. 591-3 vs. 537-0
8:20 p.m. 549-5 vs. 402

16 6:45 p.m. 573-0 vs. 591-5
8:20 p.m. 756-0 vs. 597-3

At Astro:

July 20 6:00 p.m. Dept. 775-0 vs. 402

21 6:00 p.m. 591-3 vs. 591-5

22 6:00 p.m. 549-5 vs. 597-3

23 6:00 p.m. 573-0 vs. 756-0

AMERICAN LEAGUE

At Astro:

July 9 6:00 p.m. Dept. 573-0 vs. 537-0

At Linda Vista:

July 14 6:45 p.m. Dept. 591-3 vs. 537-0
8:20 p.m. 549-5 vs. 402

16 6:45 p.m. 573-0 vs. 591-5
8:20 p.m. 756-0 vs. 597-3

At Astro:

July 20 6:00 p.m. Dept. 775-0 vs. 402

21 6:00 p.m. 591-3 vs. 591-5

22 6:00 p.m. 549-5 vs. 597-3

23 6:00 p.m. 573-0 vs. 756-0

AMERICAN LEAGUE

At Astro:

July 9 6:00 p.m. Dept. 573-0 vs. 537-0

At Linda Vista:

July 14 6:45 p.m. Dept. 591-3 vs. 537-0
8:20 p.m. 549-5 vs. 402

16 6:45 p.m. 573-0 vs. 591-5
8:20 p.m. 756-0 vs. 597-3

At Astro:

July 20 6:00 p.m. Dept. 775-0 vs. 402

21 6:00 p.m. 591-3 vs. 591-5

22 6:00 p.m. 549-5 vs. 597-3

23 6:00 p.m. 573-0 vs. 756-0

AMERICAN LEAGUE

At Astro:

July 9 6:00 p.m. Dept. 573-0 vs. 537-0

At Linda Vista:

July 14 6:45 p.m. Dept. 591-3 vs. 537-0
8:20 p.m. 549-5 vs. 402

16 6:45 p.m. 573-0 vs. 591-5
8:20 p.m. 756-0 vs. 597-3

At Astro:

July 20 6:00 p.m. Dept. 775-0 vs. 402

21 6:00 p.m. 591-3 vs. 591-5

22 6:00 p.m. 549-5 vs. 597-3

23 6:00 p.m. 573-0 vs. 756-0

AMERICAN LEAGUE

At Astro:

July 9 6:00 p.m. Dept. 573-0 vs. 537-0

At Linda Vista:

July 14 6:45 p.m. Dept. 591-3 vs. 537-0
8:20 p.m. 549-5 vs. 402

16 6:45 p.m. 573-0 vs. 591-5
8:20 p.m. 756-0 vs. 597-3

At Astro:

July 20 6:00 p.m. Dept. 775-0 vs. 402

21 6:00 p.m. 591-3 vs. 591-5

22 6:00 p.m. 549-5 vs. 597-3

23 6:00 p.m. 573-0 vs. 756-0

AMERICAN LEAGUE

At Astro:

July 9 6:00 p.m. Dept. 573-0 vs. 537-0

At Linda Vista:

July 14 6:45 p.m. Dept. 591-3 vs. 537-0
8:20 p.m. 549-5 vs. 402

16 6:45 p.m. 573-0 vs. 591-5
8:20 p.m. 756-0 vs. 597-3

At Astro:

July 20 6:00 p.m. Dept. 775-0 vs. 402

21 6:00 p.m. 591-3 vs. 591-5

22 6:00 p.m. 549-5 vs. 597-3

23 6:00 p.m. 573-0 vs. 756-0

AMERICAN LEAGUE

At Astro:

July 9 6:00 p.m. Dept. 573-0 vs. 537-0

At Linda Vista:

July 14 6:45 p.m. Dept. 591-3 vs. 537-0
8:20 p.m. 549-5 vs. 402

16 6:45 p.m. 573-0 vs. 591-5
8:20 p.m. 756-0 vs. 597-3

At Astro:

July 20 6:00 p.m. Dept. 775-0 vs. 402

21 6:00 p.m. 591-3 vs. 591-5

22 6:00 p.m. 549-5 vs. 597-3

23 6:00 p.m. 573-0 vs. 756-0

AMERICAN LEAGUE

At Astro:

July 9 6:00 p.m. Dept. 573-0 vs. 537-0

At Linda Vista:

July 14 6:45 p.m. Dept. 591-3 vs. 537-0
8:20 p.m. 549-5 vs. 402

16 6:45 p.m. 573-0 vs. 591-5
8:20 p.m. 756-0 vs. 597-3

At Astro:

July 20 6:00 p.m. Dept. 775-0 vs. 402

21 6:00 p.m. 591-3 vs. 591-5

22 6:00 p.m. 549-5 vs. 597-3

23 6:00 p.m. 573-0 vs. 756-0

AMERICAN LEAGUE

At Astro:

July 9 6:00 p.m. Dept. 573-0 vs. 537-0

At Linda Vista:

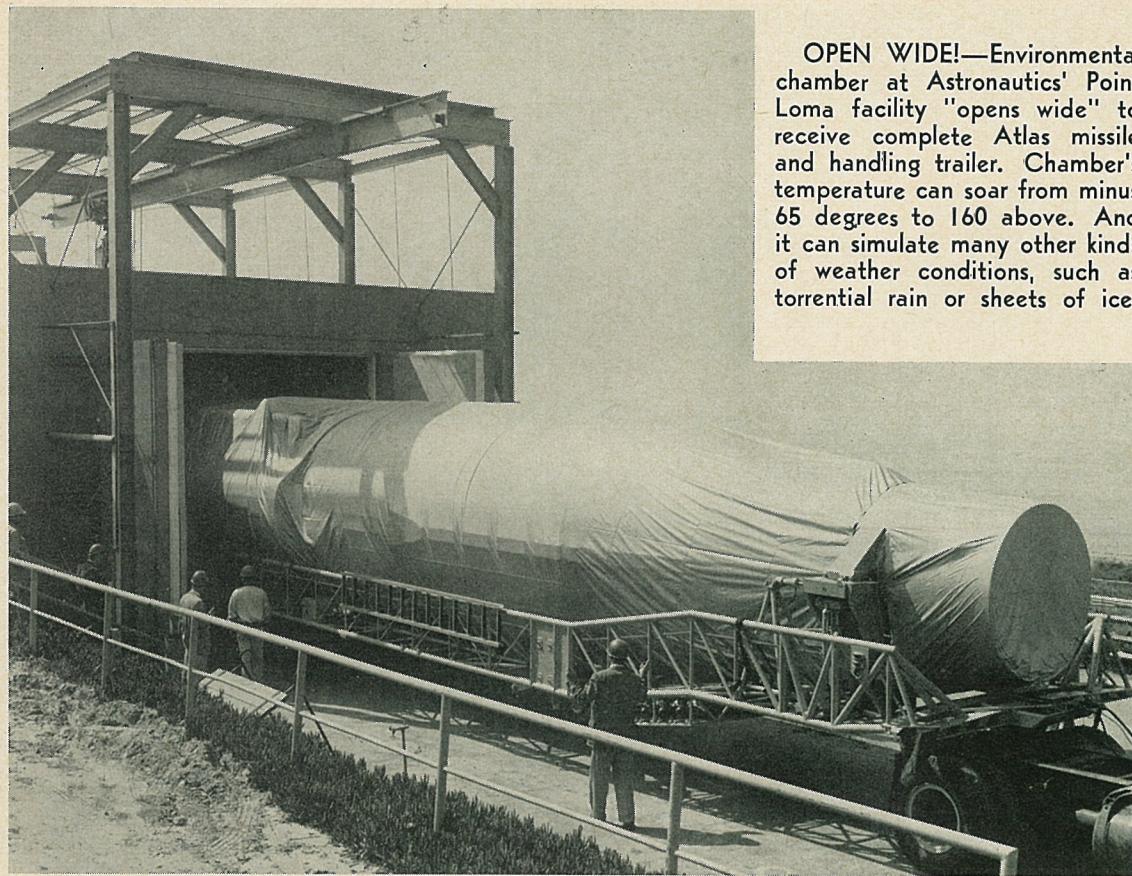
July 14 6:45 p.m. Dept. 591-3 vs. 537-0
8:20 p.m. 549-5 vs. 402

16 6:45 p.m. 573-0 vs. 591-5
8:20 p.m. 756-0 vs. 597-3

At Astro:

July 20 6:00 p.m. Dept. 775-0 vs. 402

21 6:00 p.m. 591-3 vs. 591-5



Huge 'Climate' Chamber Can Freeze Or Bake an Entire Atlas Missile

BY BRYAN WEICKERSHEIMMER
Convairity News Editor, Astronautics

Creating sub-zero cold, tropical heat or duplicating maximum temperatures present when an Atlas missile blasts off are everyday chores to a select group of Convair Astronautics men.

These feats are performed regularly by Astro personnel assigned to its Point Loma test site near San Diego.

Since 1954 when Point Loma became the first Atlas missile test site, they have simulated just about every conceivable operation involved in the Atlas weapon system and its support equipment.

Toward this end, Astro has assembled at Point Loma one of the greatest arrays of missile test equipment known to the free world. Some of the jigs and fixtures used are common to all test programs, others have been fashioned specifically for the Atlas program. All are "tools" of the test engineer.

Latest addition is a unique environmental chamber.

Measuring 89 feet long, 20 feet wide and 16 feet high, the chamber can hold an entire Atlas missile and its handling trailer. Or it can be used on single components or groups of components.

The chamber can be turned into a giant "refrigerator" with interior temperatures of minus 65 degrees. And it can become an "oven" with up to 160 degrees heat and 95 per cent relative humidity. A sprinkler system can produce high humidity or icy conditions as required, or it can make "rain" at the rate of five inches an hour. The chamber can also "brew" its own air supply. Closed circuit television makes observation of special areas possible, while peep holes from the

control room add to visibility.

However, most large tests require entering the chamber. For these special cold weather gear or asbestos suits are used as necessary. The latter contain their own hose couplings for fresh air.

Current tests are being made on an Atlas handling trailer. All working parts are being checked under temperature extremes. In time, Astro plans to demate, then remate, an entire missile during tests. In the planning stage is a program involving test of a complete van-like missile checkout trailer.

Another building at the site is used for separation tests. Systems which normally break away during flight are hoisted together to the top of a tower. Below, like a giant fish net, is a catching device. Inch-thick rope strands form a strong, web-like netting. About 160 feet in circumference, the net is secured on posts, can be raised and lowered. During tests, as cameras record each step, the break away items are separated, the lower section falling into the net below. In this manner, the same units can be retested time and again.

A smaller building boasts a power sub-station large enough to supply 100 normal homes. It is used for thermodynamic tests.

More than 1,800 heat lamps, arranged in banks, are placed scant inches from the test section. As power is increased, they become concentrated heat sources, duplicating and exceeding temperatures present as the missile builds itself to full speed after blast off.

Aerodynamic tests were performed in much the same way, with small hydraulic cylinders exerting pressure at various points.

Other tests in this area involved umbilical cord operations.

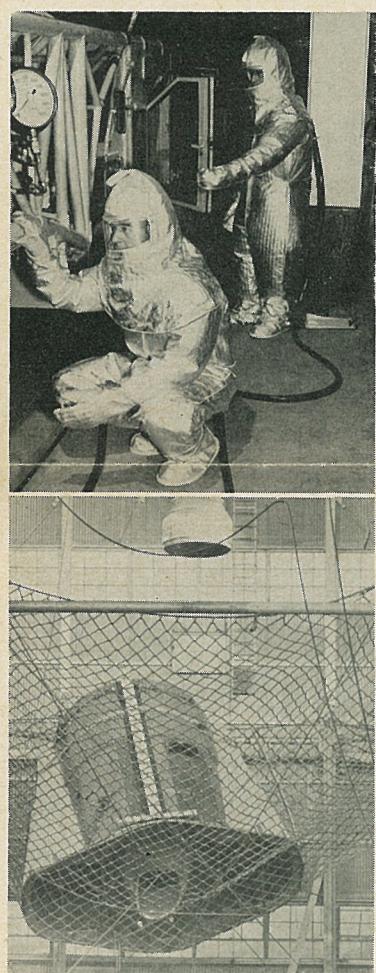
Towering above all other structures at the site is a facility for conducting fuel flow tests on many types of Atlas tanks.

Liquid oxygen is allowed to flow via a special trough to the ocean nearby. The resulting vapors create a ghost-like fog often visible for miles around.

SD's Garner Green Attends Testimonial

Garner G. Green, chief structures engineer at Convair SD, was one of the speakers at the recent testimonial dinner held in Los Angeles for Dr. Alfred S. Niles, retiring aeronautical structures professor at Stanford University.

A member of Dr. Niles' first class at Stanford, Green spoke on the well-known professor's early days in aircraft at McCook Field, now Wright-Patterson AFB.



TESTING—At top are V. W. Palmer and W. J. Harden, both Astro Dept. 756, in asbestos suits for hot work inside environmental chamber. Below, section of missile that normally breaks away in flight takes planned "tumble" into net. Latter operation is conducted in special building where cameras record action. Net prevents damage as sections practice breakaway.



HOT! HOT!—R. C. Hinck, group engineer in charge at Point Loma facility, makes note beside one of many batteries of heat lamps.

Convair FW Builds Test Duct For Powerful 'Atom Smasher'

Convair Fort Worth may soon be producing some of the components for a 12½-billion electron volt synchrotron "atom smasher" being built in Argonne National Laboratory near Chicago.

A test section of ducting for the inner vacuum chamber of the synchrotron was shipped to Argonne last month.

When the design and fabrication is checked out, Convair hopes to win a contract to fabricate the complete ducting system.

"Convair has a head start in this work because of our prior experience both in nuclear work, and our work in bonding large metal and fiber glass parts on the B-58," said Bob Thompson of manufacturing research and development.

The synchrotron will be used to bombard atoms with electrons that have been speeded up to near the speed of light—186,000 miles per second.

This is done, Thompson explained, by injecting a stream of electrons into the vacuum chamber, then pushing them along by "squeezing" them through an electromagnetic field much as an orange seed can be shot across the room by squeezing it between the thumb and fingers.

The test section was only three feet long. But the production ducting will be 54 feet long and will be. Eight pieces will join together to form a circle 150 feet

in diameter.

The ducting is made of stainless steel and plastic laminate joined in such a fashion that they will hold a near perfect vacuum.

Assisting manufacturing research and development engineers on the project were engineering department's nuclear engineers and materials and processes engineers. Tooling was made by Dept. 81-08. Actual fabrication was performed by the radome section of Dept. 35.

Visitors to SD See 880, F-106

Delegates to the 12th assembly of the International Civil Aviation Organization now meeting in San Diego saw Convair's 880 jet transports and F-106 all-weather jet interceptors move down production lines on their tour of Convair San Diego plants this week.

B. F. Coggan, Convair vice president and San Diego Division manager, welcomed the 120 visitors in the 880 mockup building before the tour Monday (July 6) through Plants 1 and 2. They were briefed on the 880 jet transport by C. G. Wolcott, domestic sales manager.

Delegates to the 30-day assembly of ICAO, an United Nations agency, represent 74 member nations.



ATOM SMASHER—Bob Thompson, left, and J. C. Perry make final inspection at Convair Fort Worth of test section duct destined ultimately for use in "atom smasher" at Argonne National Laboratory near Chicago.

TV Tape Recorder Used To Preserve B-58 Data

Television networks—with their new video tape recording systems—have nothing on Convair Fort Worth.

Identical video tape recorders are getting trial runs this month to adapt them to record test data on electronic countermeasures systems on the B-58 Hustler supersonic bomber.

Convair's two recorders are the same as those used by national TV networks to tape both picture and sound for rebroadcast.

But at Convair Fort Worth, they're used to record and preserve ground radar data obtained during vital B-58 flight tests.

The tapes can be played back immediately—or at a later date—to enable engineers to study re-

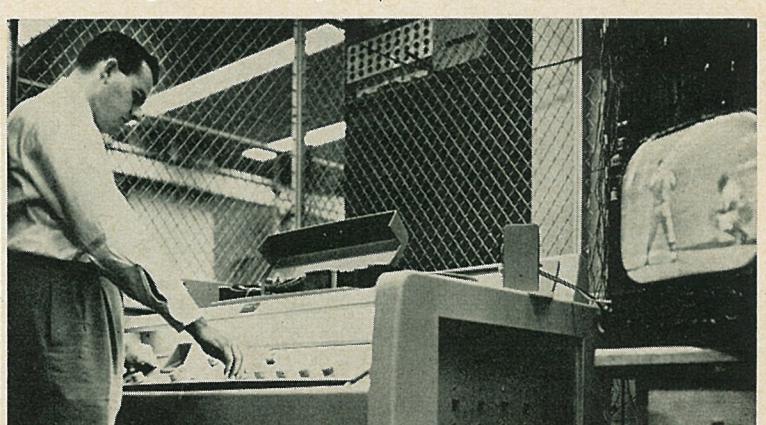
sults as long as may be necessary.

"The video tape process will result in considerable time and cost savings in the B-58 flight test program," said H. T. Stuckey, electronics laboratory supervisor.

"Now that test results can be recorded and studied later on the screen, Hustlers won't need to make as many test runs against ground radars as before."

One of the Convair recorders is located in the electronic systems lab, and the other is to be used in a mobile trailer unit.

Two of the laboratory engineers, D. D. Johnson and A. C. Baswell Jr., are performing modifications on the recorders.



CONVAIR TV—Convair Fort Worth's D. D. Johnson, aerophysics engineer, "rebroadcasts" major league ball game in test of new video tape recorder. Recorder is used in B-58 flight test program.



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

Convairity

Vol. 12, No. 15

Wednesday, July 22, 1959

SAN DIEGO, POMONA, ANTELOPE VALLEY, VANDENBERG AFB, CALIF.

Force of Field Service Engineers Will Follow Missiles to SAC Bases

Convair Astronautics this month set up two field service offices as it continued to build and train a full force of field service engineers for tasks ahead.

Offices were established at Sheppard Air Force Base, Texas, and Chanute Air Force Base, Ill. These sites have been designated as Air Force ballistic missile training centers.

Many commissioned and non-commissioned officers slated for duty at these two locations have completed individual training on the Atlas weapon system at Astro. While a few are actually on hand at the site, the majority are now engaged in further training at Vandenberg AFB, Calif.

Meanwhile, Astro is currently in the midst of a thorough training program to produce field service engineers.

Field service falls under product support department headed by Manager E. A. Reynolds. R. F. Nelson is chief of support engineering, reporting to E. T. Clare, manager of support services. Astro's field service organization includes two major groups—Atlas service and Azusa service. A. H. Gross, general supervisor, is responsible for both.

(Continued on Page 2)

Atlas field service is headed by T. G. Fleming.

It consists, at present, of over 100 members of field support at the Astro plant; the two new field offices; and a force of about 41 at Vandenberg AFB.

In time, Atlas field service will include representation at every Air Force operational unit receiving the Atlas weapon system, plus related headquarters groups.

Preparing future field service engineers for their assignments involves one of the most thorough internal educational programs ever set up at Astro. Training is supervised by product support's customer training group at Barnard School. It involves, among other things, 45 full days of classroom work. Small (12 to 15 men) classes go through complete courses on every phase of the Atlas weapon system. This is followed by on-the-job work in the factory and at test sites.

Once the new field engineer completes this phase of the program, he is ready for further work at Vandenberg AFB. There he learns, as do future Air Force ballistic missile crews, the techniques used to weld many indi-

(Continued on Page 2)

CRA Planning Putting Green Near Cafeteria

A new lunch-time recreational site is in the offing for Convair Astronautics, following announcement this week that CRA plans a putting green inside the plant reservation.

Approximately 10,000 square feet of space will be devoted to the project to be located just opposite employee services office on the east side of the cafeteria.

In time, the site will be open to all during lunch hour, according to Art King, CRA president and golf commissioner.

In an effort to save money, King is soliciting voluntary help to spread and rake soil at the site. Present plans call for this work to be accomplished following normal shift hours.

Those interested in taking part are asked to contact King at ext. 1748 for instructions.

Bus Routes to Astro Listed

New employees, plus some transferring to the Astronautics plant for the first time, may be interested in utilizing city bus service from three major areas.

Following are routes being served by two buses daily:

Route "D" between La Jolla and Astro. Departs La Jolla at 6:05 and 7:15 a.m.; Garnet and Mission (Pacific Beach) at 6:16 and 7:26; Balboa and Clairemont (Clairemont) at 6:26 and 7:37; and arrivals at 6:40 and 7:55. Returns at 4 and 5:10 p.m., arriving at La Jolla in approximately 40 minutes.

Route "G" from downtown. Departs 3rd and Broadway at 6:20 and 7:30 a.m.; 5th and Laurel at 6:26 and 7:36; 5th and University (Hillcrest) at 6:31 and 7:41; and arrivals at 6:47 and 7:57. Returns at 4 and 5:10 p.m. with arrival downtown 35 minutes later.

Route "J" from Ocean Beach. Departs Cable and Voltaire (Ocean Beach) at 6:05 and 7:20 a.m.; Lowell and Rosecrans (Loma Portal) at 6:16 and 7:31; Linda Vista Road and Ulric (Linda Vista) at 6:32 and 7:47; arrivals at 6:42 and 7:59. Returns at 4 and 5:10 p.m. with arrival in Ocean Beach 35 minutes later.

Tri-Hospital Payroll Deductions Started

Payroll deductions for the Tri-Hospital Fund Drive at Convair Astronautics appeared for the first time on checks issued July 2 for hourly people and July 10 for flat salaried.

The amount withdrawn for both salaried and hourly personnel appears as a separate entry on the tear-off check stub.

At Convair San Diego the deductions will go into effect July 24. Deductions for General Office personnel have been in effect the past month. All deductions, regardless of starting date, extend over a three-year period.

Programming Lecture Slated for July 24

Free tickets to a July 24 lecture on "Programming of Programming in Control and Computation Machines" by Dr. Norbert Weiner, professor of mathematics at MIT, are available through Astro's educational services office.

The lecture will be presented at 8 p.m. at the Pacific Beach junior high auditorium, 4676 Ingraham.

(Continued on Page 2)

(Continued on Page 2)

Astronautics EDITION

Serving Astronautics' San Diego plant and facilities at AFMTC, Fla., and Vandenberg AFB, Calif.

Astro news office, Kearny Mesa plant, ext. 1154. Vandenberg news contact, ext. 8-4148. AFMTC news contact, ext. 3038.

AFMTC, CAPE CANAVERAL, FLA., FORT WORTH, TEX.

Move Into New Bldg. 26 Begins This Weekend

A massive "game" of musical work one day at one location, report to the other the following day.

Astro's reclamation (salvage) yard as well as maintenance storage areas are now being relocated into areas where fresh paving work has been performed.

Meanwhile, various factory functions and departments are feeling the move. Some areas vacated previously are being revamped or enlarged to provide more space.

ASTRO'S DEPT. 758 BEST HOUSEKEEPER

Major assembly (Dept. 758) for the first time this year has taken over top spot in the monthly good housekeeping standings at Convair Astronautics.

Dept. 758 during June registered only .018 housekeeping violations per employee, against .020 violations for sheet metal (Dept. 732), the second-place finisher, and .029 for electronics (Dept. 772) which came in third.

Sheet metal has placed first on two monthly standings this year as has machine shop (Dept. 731), while trainer assembly (Dept. 775) shares a lone victory with the June winner.

Engineering Depts. To Donate Blood

Engineering Depts. 520 through 597 are being signed up this week for the next visit of the bloodmobile at Convair Astronautics.

Dodge Dean of employee services said the bloodmobile would be in the plant July 31 from 10 a.m. to 2 p.m. near Bldg. 26 (the new office building).

Only the departments cited above will be solicited during this visit. The blood is needed to replenish Astro's account at the San Diego Blood Bank. "We encourage your support for this important service for Astronautics," Dean said.



WELL DONE—J. R. Dempsey, Astro manager, at left, receives Air Force Association (San Diego Squadron) plaque for "advancement of missile technology" from George M. May, right, squadron commander. At center is Walter L. Jones (Astro Dept. 321), squadron vice commander.

New Trailer For Atlas Includes Booster Unit

Convair Astronautics this month is nearing the end of an exhausting program aimed at proving the merits of a trailer and a "half" slated for use by operational Air Force units utilizing Atlas missiles.

This is a later version of the familiar Atlas handling trailer, plus a new feature—a trailer slightly less than half the size of the big unit, for handling the booster section.

Both are ground support equip-

Astro's C. S. Ames Jr. To Talk on Russia

C. S. Ames Jr., chief project engineer at Astronautics, will be the principal speaker at an Aug. 8 meeting of the Western Electronics Manufacturers Association meeting slated for the Town and Country Hotel.

Ames will discuss "Russia—As I Saw It." Dinner hour is at 7:30 p.m. Astro personnel desiring reservations may contact E. T. Clare's office at ext. 1566.

ment and a part of the Atlas weapon system.

Tests began about May 1 under the direction of Astro's systems test laboratory of engineering. M. B. Mansfield has served as test conductor. The trailers were built by Goodyear Aircraft to Convair specifications.

Outward appearance of the new trailer is much like the old. However, cabs on the newer version are completely enclosed and heated.

Basic difference in the two lies in their operation. Early trailers were backed into the base of gantry towers, then pulled into the tower with the missile still aboard, later lowered after the missile was removed. Newer models will remain on the ground, while the Atlas is lifted from them.

This is in keeping with Air Force plans to store the Atlas in horizontal position at operational bases (Convairity, June

(Continued on Page 2)



"GONE" SIGHT—This shot of ground floor of new office building at Astro cannot be repeated. Partitioning has blocked view since R. L. Richards of plant engineering and R. W. Kleinhans of industrial engineering went over preliminary move plans.



OPPOSITE COASTS—Astronautics is currently building up field service engineering team for duty wherever Atlas weapon system is stationed. Field service also includes Azusa crews shown at right. Pictured are Bill Willingham, Dick Edwards, Peggy Phillips,

Force of Field Service Engineers Will Follow Missiles to SAC Bases

(Continued from Page 1) individual skills into a compact team.

At Vandenberg the field engineer also comes into contact with Air Force units he will serve later. As these squadrons complete training and take up assignments with operational units, the field engineer goes along. He will likely be one of more than a dozen field service engineers scheduled for each squadron.

(Base activation, also performed by elements of product support, will be reaching a climax as the field service force arrives with operational Air Force units. As base activation units complete their assigned jobs and move out, the field service engineer will remain as a representative of Astro.)

While an aircraft service engineer is concerned primarily with the flying product and spends less time on ground support equipment, the missile engineer, on the other hand, devotes the bulk of his time to the latter, since flights are all one-way. "Flight squawks," registered generally by a pilot, will be minimized for the missileman. Too, he will be looking over the shoulder of the blockhouse personnel, gaining first hand information on problems.

"This may sound at first like a dull assignment," Gross said. "But it will be far from it. Constant dry run countdowns and check-outs will keep both the service engineer and the Air Force crew on their toes."

Azusa's Field Service Smaller But Serves More Customers

Somewhat smaller in number, but longer in operation, is the Azusa field service organization headed by C. C. Campbell.

This unique group includes nine employees assigned to the Azusa Service Center at the Air Force Missile Test Center in Florida, and seven at the Astro plant.

While their sister product support group deals only with the Atlas weapon system, the Azusa lists customers that read like a "who's who" of the ballistic missile world. Included also are the manufacturers of the Titan, Pershing, Jupiter, Redstone, Thor and Polaris missiles.

Of primary concern is the airborne portion of the Azusa tracking and impact predictor system. A Convair product, this system provides in-flight data and exacting predictions as to where missiles will impact. It is the chief tool utilized by the range safety officer, Atlantic Missile Range.

The airborne portion of this

system is called a transponder. Although small in size, it contains many intricate electronic components. As the missile flies, signals exchanged between the transponder and the ground station provide necessary data.

Astronautics fabricates the transponders, then supplies them to the customer for installation in the missile.

Azusa field service supplies the know-how on transponder service to the customer. This may include training of personnel in various operations or assisting in special problems. For the most part, this is carried out at the customer's plant through an on-call arrangement. This phase is normally handled by the Astro plant group, although some trips are made from Florida.

Once the missile arrives in Florida for flight test, the Azusa Service Center provides service from initial check-out through actual launch. In addition, a complete service center is maintained.

Too, the Florida group works on experimental transponders and special production transponders used in aircraft tests to check compatibility of the Azusa ground station.

One unusual task involves service of Azusa check-out equipment aboard the USS Observation Island, a converted cruiser used in testing the Polaris missile.

G. F. Rugge Jr., assistant supervisor, heads the Florida operation.



Herb Byrne, Al Ducharme, John Dula and George Ruge of Florida operation. At left is group at Vandenberg AFB including Robert Loll, Reginald Schmidt, C. C. Williams, James Keenan, H. H. Hurst and Milton Schultz, seated.

Jupiter Takes Army Side Against Navy

Bobbie Waddell, Convairity correspondent in Florida, reports a story about Cape Canaveral.

Seems the Army was entertaining 350 cadets from the Naval Academy at a Jupiter launching tower. The Army officer concluded his talk with the information the Army still uses the lanyard for launching missiles in lieu of the push button system. He invited a midshipman to pull the lanyard.

One volunteer gave it a lusty pull to have a huge sign unfurl on the missile. It said "Beat Navy."

Big Field Attends Sports Car Rally

Astro Sports Car Club's July 11 rally attracted 84 cars. So many, in fact, some had to be turned away. Prizes for the event were finally presented at 12:30 a.m. Winners were those who could best navigate an obstacle course using only the illumination from their headlights.

Bill Rector was the lone Astro contestant to place, taking second in class.

Rector also took first in class at a July 5 La Jolla invitational gymkhana before Del Mar fair visitors. Dave Stephens of Astro took third in class.

Vandenberg Wives Schedule Luncheon

Convair-Vandenberg Wives Club is expecting another large turnout July 29 when they gather for a luncheon meeting at the Santa Maria Club, President Mayelle Stahl reports.

Some 55 wives attended a June meeting held at the same location. Business included discussion of a membership drive and plans for two "bake sales" held in Lompoc and Santa Maria July 11.

Astro Men to Talk Before Civic Groups

Two Convair Astronautics men will speak before local groups in the near future.

Lincoln Annas, a communication departmental assistant, will address a 7 a.m. meeting of the Presidio Optimist Club July 22, while A. H. Kurilloff of engineering's electrical design speaks July 27 before a noon meeting of the Electrical Club of San Diego at the Lafayette Hotel.

Wives Plan Luncheon At Town and Country

Two events are on tap for the Astro Wives Club this month.

At 7:30 p.m. tonight (July 22) a knit style show will be featured at a regular meeting set for the Astro executive dining room.

July 29 will find wives gathering at Town and Country for a 11:30 a.m. luncheon. Reservations for this event must be made by July 27 by calling Dixie Husted at CY-5-0593.

Astro Creates Memorials In SD Area

Two memorials have been set up by Convair employees in the San Diego area during the weeks just past.

One was in the name of Robert L. Pamperin, former Astronautics engineer killed in a diving tragedy recently. Friends contributed funds which were turned over to his survivors.

Both Astro product support elements and San Diego Division members of industrial engineering helped set up a memorial in the name of David Courington, son of Astro's H. C. Courington. He was killed recently in a traffic accident. Funds were turned over to Children's Hospital to help toward purchase of an infant formula refrigeration unit. A plaque will be attached to the unit bearing David's name.

Rehearsals Slated For CRA Talent Show

A talent show featuring Astro men, women and youngsters is now being planned for October, according to Jean Cassidy, president of the CRA women's activities council.

"An earlier request for talent revealed a great potential, but we still need help," Mrs. Cassidy said.

Those interested are asked to contact Mrs. Cassidy at ext. 14-51. Rehearsals will start in the near future.

NEW RIDER-DRIVER SYSTEM STARTED

Wholesale shifting of employees, particularly between Plant 1 and the Astro plant, late this month has prompted employee services to set up new regulations governing driver-rider files.

Effective this week cards filled out by those requesting rides will be maintained for 30 days, those offering rides will be kept in the files for 60 days.

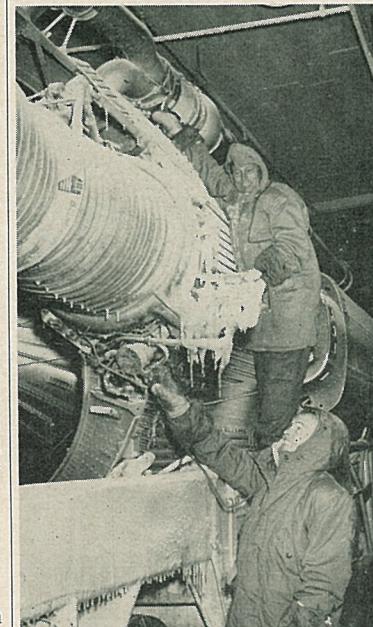
In this way, an up-to-date file will be available at all times.

The master rider-driver file is located in employee services office, Bldg. 8 (east side of cafeteria). Employees moving to the Astro plant who would like to share rides are invited to use it.

New Trailer for Atlas Includes Booster Unit

(Continued from Page 1) 10, 1959).

Another feature allows the Atlas to be demated and remated aboard the trailer. This brings into action the "half" or booster trailer. These are four-wheel units with rail-like sections along the upper surfaces. They can be backed up to and joined with



FROSTY TASK—Operating components of Atlas missile handling trailer with temperature at 60-below can be cold business. Here Bill Davis and Phil Marsh of Dept. 756 put it through environmental chamber paces.

similar tracks on the regular handling trailer. The thrust section of the Atlas (booster) then can be disconnected from the body of the missile and the entire unit hand cranked onto the half trailer, allowing work space.

Chief reason for the booster trailer is so that the thrust section can be easily separated from the missile body to provide room for crews to work on either component.

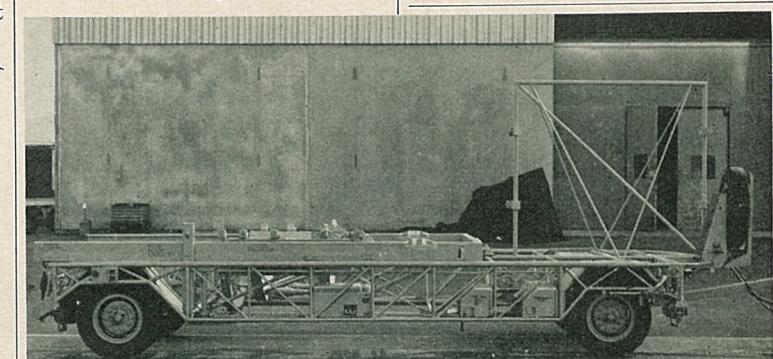
Astro's proofing of the trailer fell under qualification tests. These were performed, for the most part, with a composite missile (tankage from one missile, a static-tested booster section from another).

Road tests were performed at Astro's Missile Static Test Site, Edwards AFB, as well as en route to and from San Diego.

The trailers covered some 200 miles over paved roads, then took to gravel and dirt surfaces for another 100 miles. They were turned, backed, braked abruptly and put through just about every rough road on the Edwards base. Demating and remating were also performed numerous times.

Back in San Diego after three weeks of desert tests, the trailers (one at a time) went into Astro's environmental chamber at the Point Loma test site (Convairity, July 8, 1959).

There in minus-65 degree temperatures amid ice and frost, they had to prove each mechanical function operated perfectly. The same held true with heat conditions up to 160 degrees.



TAG-ALONG—Latest ground support equipment for Atlas includes this booster handling trailer. Unit, plus regular handling trailer, allows demating, remating of missiles. New equipment is for operational Atlas units.

Convairity

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations. General Offices, San Diego, Calif., Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Grayce Fath, Helen Pemberton, Fred Bettinger.

Astronautics Editorial Offices, Bldg. 2, new plant, ext. 1154. Staff: Bryan Weickersheimer, news editor.

FW Editorial Offices, Col. 73C, ext. 2961. Mailing address: Convairity, Convair, Fort Worth Texas. Telephone PERSHING 8-7311. Staff: Bob Vollmer, news editor; H. A. "Pat" Baker Jr., Mary Beck.

Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Offices, Room 31, Bldg. 301B, Palmdale, ext. 337. Staff: Betty Lou Nash.

Out-of-Plant Accident Survey Shows Auto Most Serious Offender

During four weeks in June, out-of-plant accidents injured approximately 150 San Diego Division employees, took a heavy toll in lost time and cost nearly \$17,000 in group insurance medical bills.

During the same period there were nearly 900 claims for general illnesses for which Convair group insurance paid more than \$75,000 in medical expenses.

Convair picks up the tab for the lion's share of all Convair employees' group insurance expenses, in the form of premiums paid to Aetna Life Insurance Co., which actually writes the checks. Employees do contribute to their disability insurance, however, and for life insurance above a certain level.

SD's employee services office reported that the number of accidents was about average for the period, which would mean that at this rate over a year's time SD Division employees suffer nearly 2,000 out-of-plant injuries. (Significantly, during the survey period there were no in-plant disabling accidents whatsoever at SD Division!)

No figures were forthcoming from Astronautics, Pomona or Fort Worth Divisions. However, assuming that the ratio would be roughly the same, an estimate based on relative populations would indicate that for all Convair, out-of-plant accidents would run nearly 500 a month or nearly 6,000 a year.

The SD Division survey was based on employees alone. De-

Note that although auto accidents amounted to only 22 percent of the total number, the cost was nearly half of the total group insurance money paid out. Some of the auto injuries were comparatively minor, with costs between \$10 and \$50. But there were some big ones: \$872, estimated off-the-job, two months; \$1,255.22, off-job indefinitely; \$512, two months; \$111, thumb mashed in door; \$600, three weeks off.

The "miscellaneous" includes two employees who had stepped on nails. For one of them group insurance paid medical costs of \$250. A stubbed toe amounted to a \$42 bill. A hernia suffered while pushing a stalled car cost \$735 and the individual had been



"Just because I waxed the floors, you don't have to wear spikes!"

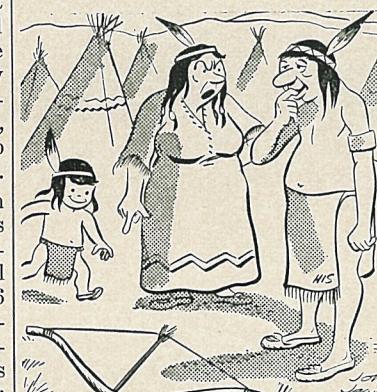
off seven weeks when the survey was taken. There were two cases of food poisoning (cost \$32). A blow on the mouth ran a bill of \$75.

Workshop and kitchen accidents were chiefly minor cuts and bruises, but one wrist, cut on a broken glass, involved medical expenses of \$102.50. One workshop injury involved \$800 in expenses and an estimated two months off the job.

Most of the falls were under \$100, broken wrists, fingers, ribs, back and ankle injuries. However there was a \$600 spine injury, the largest in this group and a fall that caused a \$166.50 eye injury and a month off the job.

Sprains from lifting various heavy objects around the home were prevalent, about 20 per cent of the accident total. Most of these were under \$75 each in medical cost. The most serious, suffered during yard work, has cost \$185 in medical costs so far and the individual is still off the job.

The "sports" classification contained one truly serious accident,



"I hear this week's program is going to be a real shocker!"

pendent claims usually outnumber those from employees by about 2½ to one, so the accident toll for all Convair families would be considerably higher. The survey involved cases which were ostensibly "closed" during that four-week period, though not all were actually completed because a number of the more severely injured individuals remain in hospital or are convalescing at home, with attendant continuing group insurance expense and lost time.

Of the accidents reported in the survey period, sports injuries numbered 25 (medical cost: \$2,655.47); autos injured 33 (medical cost: \$8,231.12); falls hurt 36 (medical cost: \$2,082.50); workshop and kitchen mishaps injured 11 (cost: \$1,157.50); sprains involved 31 (cost: \$1,402.50); and there were 12 miscellaneous (cost: \$1,157.50).

a gun shot wound suffered while hunting, with \$1,500 medical expenses and an estimated three months off the job. There were four knee sprains while bowling (about \$25 each); a fractured jaw suffered in a volleyball game (\$150) and a soccer injury that meant \$67 and ten days off the job. There were three water ski injuries and two involving horses. Swimming accounted for a half dozen accidents. The most serious was a \$165 head injury received while diving. There were five "ball playing" injuries, one of which cost \$85.

Coggan Recovering Following Surgery

B. F. Coggan, Convair vice president and Convair San Diego Division manager, is home recuperating from a recent abdominal operation performed at Scripps Memorial Hospital.

His condition is described as "most satisfactory." His doctors are of the opinion that he will be able to return to work within the next two or three weeks.

Surgery was of a corrective nature and disclosed that there was no malignancy.



MOVIE MAKERS—Here is motion picture crew at Hurricane Mesa shooting over edge of 1,500 foot cliff at parachutes which landed in valley. Wearing white hat is Jerry Ratliff, Convair Fort Worth motion picture director.

New B-58 Escape System Test Series Under Way

First in a series of new B-58 escape system tests by Convair Fort Worth crews got under way this month at Hurricane Mesa, Utah.

Tests are being conducted with a rocket-powered sled carrying a nose section of a Hustler taken from the Convair Fort Worth assembly line.

During the first run, the sled scorched along rails which end at a 1,500-foot cliff overlooking the mesa's scenic valley floor. Dummy passengers were ejected from crew stations at high speeds and parachuted into the thickets and wilderness below.

According to J. E. Hickok, project test engineer, two stages of rockets were used for the 14,000-lb. firing weight of these first tests. The sled traveled at about 204 feet per second.

He said the second stage of rockets was set off about 100 feet after the first. At 200 feet beyond that, the No. 2 ejected. At 200 feet more, the pilot's station ejected.

While the tests are going on, engineering motion picture people are busy grinding away thousands of feet of film for later study.

Jerry Ratliff, engineering motion picture director, said his crew has cameras stuck away in every possible place and at every angle during a run.

Recovery of the ejected items after the test isn't easy, according to Hickok. Bulldozers have to be used to make roads to the spots where they land. High boots must be worn for protection from rattlesnakes.

Hickok said the first tests this

month were successful. The test series consists of 12 scheduled sled runs in the development part of the program and three scheduled runs for the qualification part.

Ken E. Thompson, a Convair Fort Worth test engineer, is remaining at Hurricane Mesa until the project is complete. Convair also has two full-time test lab mechanics on hand with him. They are G. Cain and J. N. Baldwin of Dept. 36.

Hickok and the movie people are on location only when the tests are under way.

Those remaining for the entire program are living at nearby St. George, Utah, a town of about 5,000 in the proximity of the Zion National Park and the Virgin River.

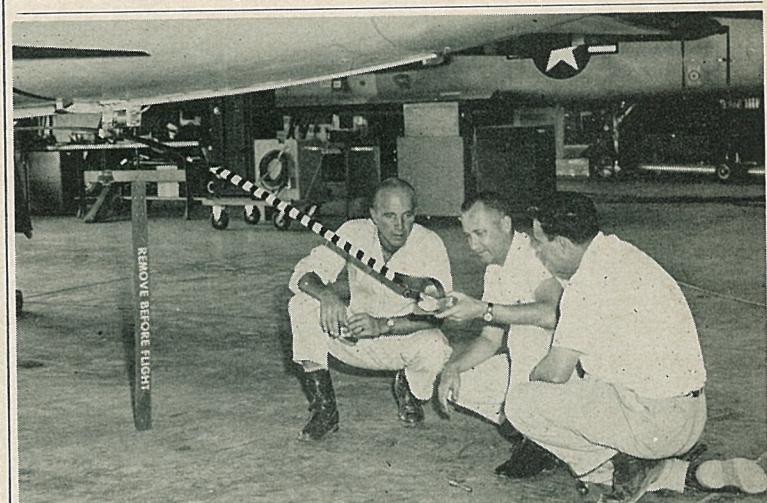
The mesa's elevation is 5,000 feet, and the weather is generally hot, dry and clear, with about five inches of rainfall a year.

Movies on Missiles Shown to Thousands In So. California

Literally thousands of people in schools, service clubs and other groups have seen motion pictures of Convair's missiles during the first half of 1959. C. D. Cornell, special assistant to the vice president and manager, Convair Pomona, said.

Over 9,000 people have seen "Terrier, the New Fleet Weapon," 22,500 have seen "Atlas 12A," and over 11,000 have seen "Atlas Satellite." The three films were shown a total of 211 different times, 107 times in schools and 104 times as community relations gestures. Most of the showings were in Southern California.

The films are shown regularly as a part of Convair Pomona's junior science school visitation program, and they are also available upon request to clubs and other groups. Inquiries should be addressed to Cornell, ext. 3202.



NEW TAIL HOOK—Left to right, Charles E. Myers Jr., chief test pilot at Convair Edwards; Carl Pieper, assistant flight test engineer; and Tom Buchanan, control engineer, inspect new type tail hook installed on F-106 at Edwards facility, where new arresting system is being put into operation.

F-106s Get Tail Hooks For Fast Stop System

Convair F-106s will be the first Air Force aircraft to be equipped with a new-type "water squeezer" arresting system which tests show is twice as effective as the former chain barrier type.

A contract for spring steel arresting hooks for installation on F-106s has been awarded by Convair to All American Engineering Co. of Wilmington, Del., developers of the system.

The hook, named the Sheaffer Spring Hook for its inventor, is designed to operate in conjunction with the company's runway cable arrest system. First installation at a United States AF base is now in operation at Edwards AFB.

Successful tests of a prototype hook on a F-106 jet interceptor were completed this month at Edwards. The hook has been approved as standard equipment on Century Series aircraft at ADC bases.

The AAE hook, a strip of spring steel, is secured to the underside of the jet, held flush and under tension. When the pilot pushes a button, the hook springs into its lowered position for engagement.

Similar to the system used for landings on aircraft carriers, the hook engages a cable which runs across the runway. The cable, in turn, is attached to pistons inside two 1500-ft. steel tubes, partially filled with water, buried on each side of the landing strip. The landing plane thus drags the pistons through the water, bringing it to a quick, but smooth, halt.

The tail hook system has proved completely effective without damage to aircraft in comparison with the chain barrier system—a heavy cable designed to arrest the plane by catching the wheels—which often resulted in injury to the aircraft.





RUNNERS-UP—Believe it or not, these seven lovely daughters of Convair Fort Worth families failed to win recent Ridglea Swimming Pool Association beauty contest. In group are Judy Starnes, Jo Ann Perry, Judy Tkac, Anne Busey, Kathy Schenck, Dale Dahlberg and Patricia Penn.

'Speech Reading' Solves FW Mechanic's Deafness

Talking on the telephone fascinates Convair Fort Worth's F. C. Riley, who's been living in a world of silence since birth.

Riley, a structures mechanic in Dept. 58, "speech reads" fluently and is soft-spoken and distinct in his own speech. ("Speech reading" is the term now used instead of "lip reading.") He even talks on the telephone by "listening" to vibrations.

Speech therapists at TCU's Speech and Hearing Clinic marvel at the progress he's made. Riley started learning to speech read at TCU a little more than a year ago.

Efforts to conquer his handicap started back in 1931 when he enrolled at the old Van Zandt School for the Deaf at 11 years of age. Here he studied sign language until he was 14 years old, then went to Austin to the Texas School for the Deaf.

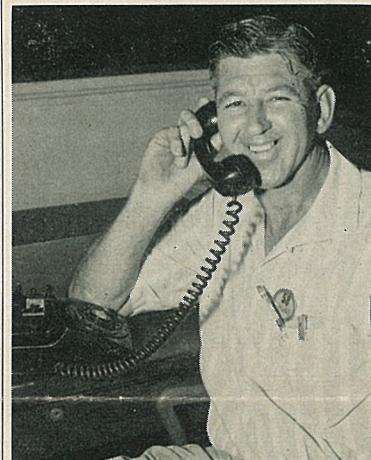
When he came to Convair 13 years ago, Riley could hardly make himself understood, but he didn't give up.

At the TCU Speech and Hearing Clinic he has been working with Mrs. Ernest Lawrence, a member of the TCU faculty.

"Mr. Riley has come a long way in a short time," Mrs. Lawrence commented. "And you must realize that he came to us after

he had entered his thirties!"

When asked if he had any special hobbies, he grinned and said: "Yes. Talking!"



HELLO! — Convair Fort Worth's F. C. Riley of Dept. 58 has been deaf since birth but is now able to understand others and to talk fluently himself.

Convair Samaritan Group Wins Award

A flight safety award has been won by a Military Air Transport Service unit flying Convair C-131 "Samaritans."

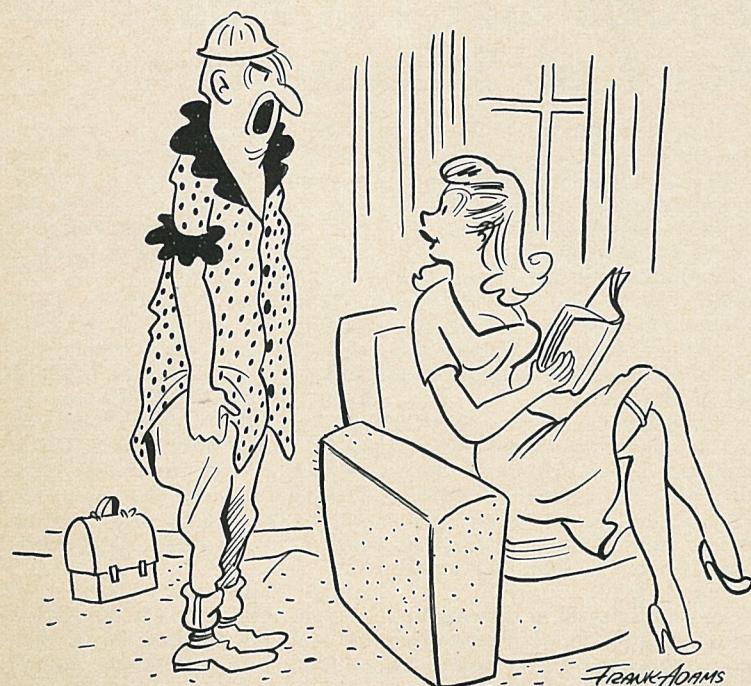
The 1st Aeromedical Transport Group headquartered at Brooks AFB, Texas, has received the MATS outstanding achievement award in flying for 1958. The group has been flying the Convair-built "flying hospitals" for over two years.

Accepting the award from Col. E. J. York, chief of staff, Western Transport Air Force, Travis AFB, Calif., was Col. L. B. Matthews, group commander.

Two Convair Actors Appearing in 'Suds'

Two Convair employees are in the cast of "Suds in Your Eyes" now playing its 12th season at Coronado Community Theater.

Richard A. Martin of Astro's Dept. 531-1 and Bert Horner of San Diego Division's Dept. 6-51 are alternating in the role of "Wilson." Martin also played the role last year.



"Jack's wife doesn't make his work shirts! Pete's wife doesn't make his work shirts, Art's wife doesn't—"

TWA Sends Key Men to Convair For 880 Class

Convair SD is hosting TWA maintenance personnel here for the first six-week training courses for the Convair 880.

SD manufacturing as well as customer service will assist in the training program as TWA representatives will be observing 880 factory processes in detail as a part of their on-the-spot training.

"Our aim is to provide a program tailored to the requirements of TWA and our other customers," said L. J. Bordelon, chief of transport service. "We have worked closely with the TWA organization in preparing this effort during the past two years."

Bordelon welcomed 39 TWA instructors, supervisors, maintenance foremen last Monday morning (July 13) as they arrived in San Diego from five key locations where 880s will eventually be serviced—Kansas City, New York, Chicago, Los Angeles, and San Francisco.

The group is now divided into two classes, explained Don Maxion, SD regional field representative in charge of 880 customer service training. Part are entered in the aircraft systems program and the rest in the electrical course. TWA program coordinators are C. K. Sharp and M. E. Maltby, both of Kansas City.

Next TWA classes, a course on the 880 power plant and one on electronic systems, will start the first part of August while Delta training will begin the end of that month. The TWA courses will be repeated later in the fall for other groups.

Classes for 880 customers will be running continuously for different airlines during the next nine months, Maxion said.

SD Assembler Killed In Bay Door Accident

Russell L. Beard, hydraulic assembler at Convair SD Plant 2, was fatally injured July 9 when a missile bay door of an F-106 interceptor snapped shut.

Beard was repairing a malfunction of the bay mechanism with his head and shoulders inside the plane when the bay door tripped shut. Officials said that he apparently thought the lever operating the doors was set to hold the doors open. He was dead on arrival at Mercy Hospital.

A native of Kansas City, Kan., Beard had been with Convair since July, 1950. He was a retired Navy chief machinist in submarines with 30 years' service.

Larry Hayes Named Jr. Achiever Head

Convair Fort Worth's Larry Hayes has been elected new president of the board of Junior Achievement of Tarrant County.

Hayes, administrative assistant, was elected at a combined meeting of the board and corporation.

Division Manager Frank W. Davis and M. J. Scott of the FW suggestion section are also on the Junior Achievement board of directors.

New City Manager Given Tour of Plant

New City Manager L. P. Cunningham got a hearty Texas welcome recently as Division Manager Frank W. Davis showed him and Mayor Tom McCann through Convair Fort Worth.

Cunningham and Mayor McCann were flown to Convair by helicopter from Bell Helicopter Corp. They were shown around by Marion L. Hicks, assistant division manager, J. T. Cosby, B-58 program director and manager of customer service, and B. G. Reed, assistant division manager.



EXHAUSTING—Doris Jean Suiton (Convair SD Dept. 603-9) is professional Tahitian dancer. Average performance lasts but two minutes because of strenuous hip swinging and muscle-tiring movements. Other members of act are husband Peter (on left) and Opi Fule. Photo by Ed Tice.

Hard Work

Tahitian Dances Exhausting; Two Minutes and You've Had It

A two-minute Tahitian dance can be more exhausting for a performer than sixty minutes of playing time for a football star.

Take it from Doris Jean Suiton (SD Dept. 603-9) who is "Manutani" of the professional dancing team, "Manutani and Peter."

"Two minutes is about all I can take at the present time," Doris Jean said. "After that my muscles stiffen tighter than a drum, especially in the legs and thighs."

And that's after more than a year of almost daily practice and a two-month trip to Samoa where she had a first-hand opportunity to observe the intricacies of the dances.

"Some people tend to confuse the hula and the Tahitian dances when there is actually no real similarity other than the grass skirts. The Tahitian dance is much more strenuous and the hips have to move much faster."

"We strive to keep our performance as authentic as pos-

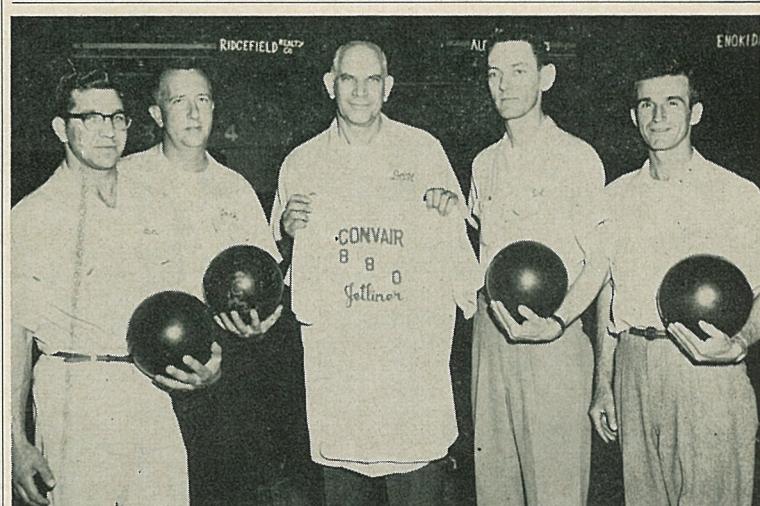
sible," Doris Jean said. "Commercialism in a dance such as this tends to destroy its native origins."

The other half of the act is Doris' husband, Peter. A Samoan by birth he gets the act off stage with a dramatic flourish, the Samoan knife and fire dances.

Doris has also tried her skill at the latter dances but is convinced they can be quite dangerous for the novice. Her husband generally performs the knife dance with another male partner, Opi Fule.

"Those knives are sharp, there's no doubt about that. The success of the dance depends for the most part on a keen sense of timing and balance. Particularly when the partners swing the knives in sweeping arcs at each other's head. You have to be positive of the exact split second to duck your head," Doris added.

They have appeared frequently on stage at various events in San Diego, most recently at the San Diego County Fair.



880 JETLINERS—Even though far from San Diego, there's an 880 Jetliner team bowling in Washington, D.C., Major League (scratch). Members are, from left: George Antonacci of Andrews AFB, Capt. Don Mercer of Bolling AFB, Dave Weitzman of Convair SD transport field service, Sgt. Edward Dwyer of Andrews, and Sgt. Joe Piepoli of Bolling. Their high three-game series is 2,974 and high one-game score is 1,054.



DELTA VISITORS—C. E. Woolman, president of Delta Air Lines, and T. P. Ball, the airline's superintendent of flight operations, flew for first time recently in Convair 880 jet airliner. Delta will receive the first of 10 880s it has on order in January. From left: Woolman; Don Germaraad, chief engineering test pilot at Convair SD; Ball; and D. H. Digges, special assistant to Convair SD Division manager. After the flight, Woolman termed 880 a "sweet airplane."

NEWS FROM OTHER DYNAMICS DIVISIONS

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair, Limited, of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., aircraft, missiles, and space systems.

Electric Boat of Groton, Conn., submarines.

Stromberg-Carlson, of Rochester, N. Y., telecommunications, electronic equipment.

Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.

General Atomic of San Diego, Calif., nuclear research, development, production.

Electro Dynamic of Bayonne, N. J., electric motors, generators.

Stromberg-Carlson Awarded Extension of SCATE Contract

ROCHESTER — A \$1/2 million extension of a subcontract for SCATE (Stromberg-Carlson Automatic Test Equipment) for testing the electronic portion of the Nike-Zeus missile has been awarded Stromberg-Carlson Division by Bell Telephone Laboratories, according to George A. Peck, vice president and general manager of Stromberg-Carlson's Electronics Division.

SCATE is a flexible system which can be used to check complex electronic systems automatically and to pinpoint any faults which are discovered. Using a building block concept, SCATE reduces the cost and time of designing test equipment individually for each weapon program, Peck said.

The Nike-Zeus award specifically is for continuation of work on the application of the radio frequency portion of SCATE to test the missile's guidance system. Part of an overall system, it checks the response of the missile for frequency, power, triggering sensitivity, time delay and other features.

SCATE can reduce a typical 12-hour manual testing program of a modern weapon electronic system to less than five minutes.

Free from human error, it conducts a complete program of thousands of tests on any missile,

aircraft or ground electronic system.

Development of SCATE began six years ago when Stromberg-Carlson designed test equipment for its own use in the inspection of electronic equipment being produced for the armed forces.

Common circuits in various types of test equipment later were reduced to standard block form using solid state devices. Now with only the addition of special stimulus generators and output converters, specific to the equipment under test, SCATE can become quickly adapted to virtually any electronic system.

For the past three years Stromberg-Carlson has been engaged in the development and production of a large-scale semi-automatic test facility for checking the guidance system of the Atlas missile. This equipment was designed to provide factory, missile assembly-area and prelaunch check-out.

TACAN test sets to check the airborne tactical air navigation equipment, and TACAN beacon test monitor and control systems were among specific test equipments developed using initial work on SCATE as a basis.

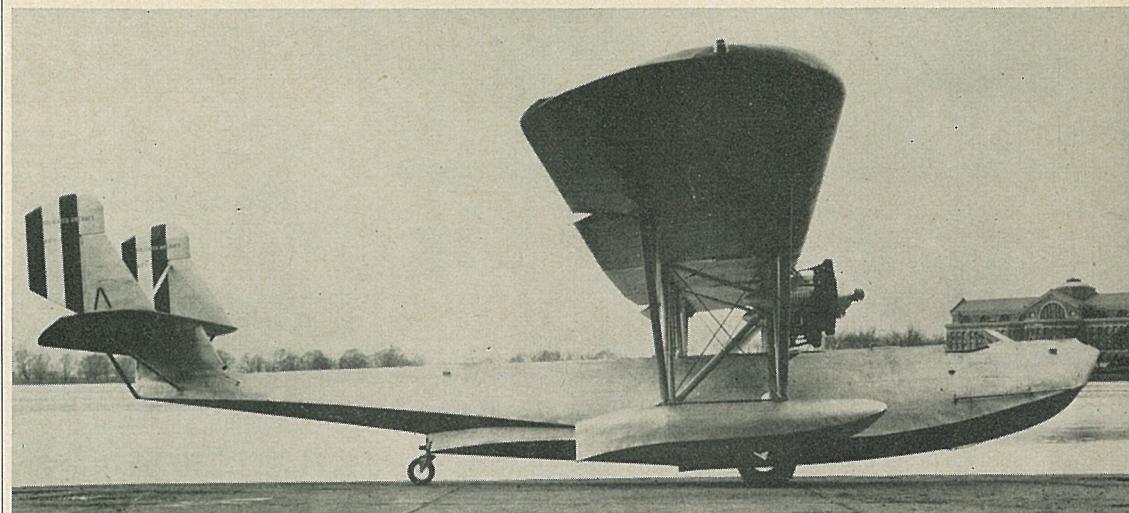
Development is now under way on the application of SCATE to testing the electronic system for a new military jet aircraft.



IN PRODUCTION—Canadair's first CL-44 jet-prop transport on production line at Montreal is well on way to completion. CL-44 will carry 65,000-lb. payload at nearly 400 mph. RCAF has ordered 12 and 15 have been sold to U.S. cargo lines. Plane is powered by four Rolls-Royce Tyne jet-prop engines.



OFF FOR ASSEMBLY—Billed as "The Admiral, largest flying boat in USA," XPY-1 was sent in sections by rail from Buffalo to Washington Naval Yard because Lake Erie and Niagara River were both frozen over. Photo was taken day before Christmas, 1928.



THE XPY-1—This was flying boat which won Navy design contest—but Martin won Navy contract to build.

Information, Please? Just Call Convair

There's at least one woman living in San Diego who must think Convair employs a variety of experts in all fields.

Lucile Learned, a Plant 1 SD switchboard operator, received a call and a woman asked:

"How long does it take a cat to have kittens?"

"Sixty-three days," Lucile, who is somewhat of an authority on cats, replied automatically. Then she quickly added: "This is Convair. Whom are you calling?"

"Oh!" the voice replied. "I thought this was the veterinary's office . . . but thanks for answering my question."

Firemen Given Navy Briefing

Convair SD Fire Chief H. C. Lyter and several of his lieutenants are at Miramar Naval Air Station today (July 22) witnessing a fire demonstration and receiving a briefing on the base's fire training program.

Commanding officers of the Convair SD fire department and two security officers were expected to make the trip, said F. G. Merritt, chief of SD industrial security. The security officers were sent especially for the arson phase of the training. Included in the day's program will be a structures fire fighting demonstration.

The visit is a part of a reciprocal program Convair SD's fire department has developed with other units in the San Diego area, including those of North Island NAS and the Coast Guard.

Approximately 60 Navy and civilian personnel of the Miramar fire department made their first visit to Convair San Diego the first of the month when the SD fire department sponsored a two-day tour of Plants 1 and 2.

Payne Johnson Named Public Relations Head

SAN DIEGO—Appointment of Payne B. Johnson as head of advertising and public relations for Stromberg-Carlson here has been announced by Dr. Donald G. Wilson, general manager.

An advertising and marketing graduate from the University of Southern California, Johnson has been previously affiliated with KFSD-NBC radio, the Phillips-Ramsey Company, San Diego, and the publicity department of Southern California Edison Company in Los Angeles.

XPY-1 Design Won Contest But Martin Won Contract

(Following is installment No. 13 in a continuing history of Convair.)

At Dayton in 1928 I. M. Ladd's Consolidated Aircraft engineering staff was at work on a Navy design competition calling for a huge flying boat of more than 80-foot wing span, to have a fuel capacity of at least 750 gallons. RAdm. W. A. Moffett, chief of the Bureau of Aeronautics, announced that a plane meeting these specifications would be capable of flying non-stop from the West Coast to Hawaii, a distance of more than 2,000 miles.

Ladd designed a twin-engine monoplane of 100-foot span, having an all-metal hull whose configuration derived from the Navy's transatlantic NC boats of 1919. The plane was hurried to completion at Buffalo in December. Since both the Niagara River and Lake Erie were frozen, it was crated on flat cars and shipped to Washington Naval Yard for assembly.

The XPY-1 was test flown off the Anacostia River Jan. 22, 1929. Civilian seaplane pilots were few and the Navy supplied Lt. W. G. Tomlinson to handle the controls. (He subsequently broke in William B. Wheatley, Consolidated civilian pilot.) Those aboard included Ladd, who always insisted upon making the first flight in any plane of his design; Edward P. Warner, Assistant Secretary of the Navy for Aeronautics; and Capt. H. C. Richardson, USN, designer of the NC boats, who filled the navigator's berth.

The big plane "roared down

the river on a 10-mile wind . . . lifted easily after a 650-foot run, and climbed quickly," the New York Times reported. The flight went well. Richardson told a reporter later: "The boat is very stable. It felt good to have something solid under foot."

The Times quoted Navy officials as saying Warner hoped, in buying the XPY-1, to foster development of large flying boats for commercial lines. This was ironical, because Consolidated President Reuben Fleet was soon fostering a large commercial airline to develop a customer for his flying boats. About that time, however, the Navy awarded the contract for nine production models of the XPY-1 to Glenn L. Martin Co.

"They underbid us a half million and lost a million on the job," Consolidated men were still saying a quarter of a century later.)

Edmondson Named To Tool Committee

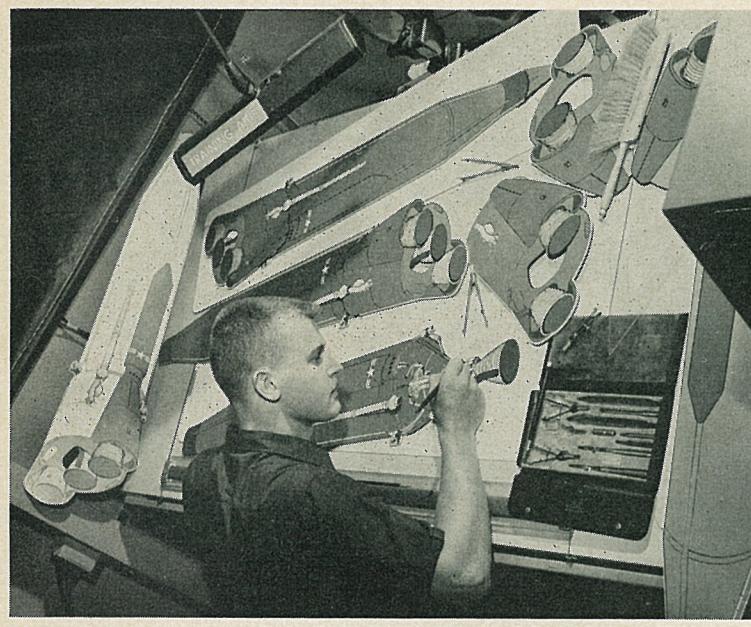
Convair Fort Worth's F. L. Edmondson has been appointed to the national technical publications committee of the American Society of Tool Engineers.

Edmondson is an assistant supervisor in tool planning.

Other Convair people on society committees include A. E. Unruh of Dept. 23-2, chairman of the membership committee, and F. P. Simpson of Dept. 24-7, vice chairman, program committee.



"Your teeth are in fine shape, but your gums have gotta come out!"



BREAK AWAY—Astronautics uses many training aids in conducting multiple classes daily. Here Ron Barlow, educational services illustrator, works on cardboard missiles showing how booster section, nose cone break away in flight.

Colorful Cardboard Missiles Demonstrate 'Break Aways'

Convair Astronautics, now conducting training classes over 12 hours a day throughout the week, has collected an unusual assortment of training aids.

They range from those large enough to cover most of one classroom wall down to 2 x 2-inch slides. Each has a single purpose—to help students understand subjects ranging from intricate missile systems down to simple indoctrination.

Latest addition, and a good

Log Book Entries

Promotions

ASTRONAUTICS

Promotions to or within supervision effective July 6.
Dept. 192-1, Data Processing: To data processing supervisor, D. L. Hillery. To data processing asst. supervisor, M. M. Kosmas.

Dept. 321, Support Engineering: To customer training asst. supervisor, R. E. Dixon. J. K. Pollaniemi, R. Romero, D. A. Vigil.

Dept. 342-3, Support Quality Control: To inspection asst. supervisor, V. M. Frankfater.

Dept. 343-3, Support Manufacturing Control: To GFE asst. supervisor, P. E. Vandeford.

Dept. 535-3, Propellant Utilization: To design group engineer, R. I. Kreisler.

Dept. 541-3, Body Structure: To design group engineer, C. Pruckner.

Dept. 547-6, Telemetry Test Equipment: To asst. elect. group engineer, L. C. Hymas.

Dept. 551-3, Ground Trajectory Measurement & Radiation Control: To asst. elect. group engineer, D. C. Prim.

Dept. 595-9, Reliability: To research group engineer, W. B. Otto.

Dept. 756-0, Engineering Test Support: To asst. general foreman, R. T. Bauman.

Dept. 771-0, Mockup Proofing Primary & Final Assembly: To foreman, W. L. McDougal. To asst. foreman, C. M. Shackelford.

SYCAMORE
Dept. 573-3, Convair Operations: To asst. foreman, H. E. Johnson.

VANDENBERG
Dept. 576, Convair Operations: To manufacturing control asst. foreman, L. T. Nelson. To inspection asst. supervisor, J. M. Rohr.

WARREN
Dept. 351, Convair Operations: To manufacturing control supervisor, E. G. McCleave. To manufacturing control asst. foreman, W. Z. Clark Jr. To asst. foreman, V. Hicks, L. E. Stanley.

Service Emblems

ASTRONAUTICS

Service emblems due during the period July 16 through July 31.

Fifteen-year: Dept. 595-2, T. T. Tanahski.

Ten-year: Dept. 193-0, I. T. Walsh; Dept. 344-1, J. F. Du Bois; Dept. 771-0, R. L. Witt.

Births

ASTRONAUTICS

ARMSTRONG—Son, Michael, 5 lbs., 6 oz., born May 3 to Mr. and Mrs. Ken Armstrong, Dept. 576-3.

BROWN—Daughter, Susan, 7 lbs., 4 oz., born June 19 to Mr. and Mrs. Roger Brown, Dept. 576-6.

CAPO—Son, 7 lbs., 8 oz., born June 26 to Mr. and Mrs. R. V. Capo, Dept. 571.

DIERKING—Son, David Duane, 7 lbs., 15/4 oz., born July 4 to Mr. and Mrs. L. D. Dierking, Dept. 321-7.

MANEY—Daughter, Clare Amber, 8 lbs., 11 oz., born July 2 to Mr. and Mrs. L. R. Maney, Dept. 571.

MCCLURE—Daughter, Patricia Jean, 7 lbs., 1 oz., born June 24 to Mr. and Mrs. E. E. (Gene) McClure, Dept. 597-3.

ORTEGAS—Son, Mark Lawrence, 10 lbs., 8 oz., born June 21 to Mr. and Mrs. Rudy Ortegas, Dept. 576-1.

SULLIVAN—Son, 6 lbs., 12 oz., born June 18 to Mr. and Mrs. H. E. Sullivan, Dept. 576-9.

TOLLEY—Son, Richard Keith, 6 lbs., 11 oz., born June 29 to Mr. and Mrs. Richard Tolley, Dept. 571.

New Quarters Now Occupied By Electronics

Electronics manufacturing at Convair San Diego has been centralized in new quarters on the lower floor of Bldg. 4, Plant 1, as of this month.

"Expansion of our electronics production capabilities was necessitated not only to meet present committed electronics work, but to provide an integrated manufacturing facility with room for future expansion," explained R. E. Honer, assistant chief engineer-electronics.

So far, this year's electronics activities in the production of airborne and ground-based radar systems, data acquisition handling systems, and ground support equipment has surpassed last year's by over 50 per cent in dollar value, he said.

E. W. Carlson, who is responsible for electronics manufacturing operations at Convair SD, forecast a buildup of personnel which would double the number engaged in the work by the end of August. At present there are about 300 persons engaged in electronic manufacturing throughout SD Division. Of these, 150 have been relocated in the new Bldg. 4 area.

Approximately 40,000 sq. ft. of space in Bldg. 4 will be converted to electronics manufacturing and related administrative offices by 1960, said Carlson. Manufacturing operations are now occupying 13,800 sq. ft. along the east side of the building, increasing to 20,000 sq. ft. by the end of August. Half of this additional space will be on the second floor for offices.

Girl Golfers to Play Mission Bay Course

Girl golfers at Convair Astronautics take to the Mission Bay golf course Aug. 1 for an 18-hole handicap event beginning at 8:30 a.m.

Lee Stone, ext. 1898, will accept entries.

Lee copped honors during the June event at Flying Hills, coming in ahead of Florence Givens and Mary Lou Alford.

SPEED LIMIT 25 MILES

Complete reorganization of the Astro Fishing Club is scheduled for a July 29 meeting set for 7:30 p.m. in the Astro executive dining room.

Frank Budz, Dept. 772, has taken over operation of the CRA organization.

"At our first meeting we have many things to discuss," Budz said. "But our primary purpose will be to get the club rolling."

Slated for attention are plans for various fishing parties as well as rules for awarding prizes for both fresh and salt water catches. Also under study will be ways of setting up a regular club room to be used for fly tying, plug molding, rod tying and other related chores.

The club is open to all Astro employees and their families who are interested in fishing in any form.

"We would like to see a good



MOVED—Electronics fabrication and test function has now joined other electronics production operations in east side of Bldg. 4, SD Plant 1. Arrangement of units follows same pattern as pictured in central section of new area.

Balmy Weather Finds Water Skiers Going 'All Out' on Every Weekend

Balmy weather in the San Diego area during recent weeks has found the Astro Water Ski Club operating "all out" over most weekends, Commissioner Bill Johnson reports.

Astro water enthusiasts gather at Gleason Point, Mission Bay, each Saturday and Sunday at 9:30 a.m., continuing their activities through the day. In addition to regular ski tows, etc., most days find individual parties engaged in picnic lunches and games around the water's edge.

Astro CRA has provided the group with an 18-foot inboard cruiser for skiing.

Novice skiers are offered instructions by qualified club members. A charge of 25 cents is made for each tow around the bay to help defray operating costs.

Assisting Johnson in operating the activity is a full slate of officers, installed at the group's June meeting.

They include: Jerry Lannue, president; Paul L. Cook, vice president; Charles R. Moore, treasurer; Sharon M. Carter, secretary; and Walden R. Kellogg, operations manager.

One of the highlights of the June meeting was the naming of the club boat. After considerable discussion the group decided on "Jinx."

In addition to regular weekend activities, Astro skiers often make special trips. Latest of these was a weekend campout and ski party held early in June at the Salton Sea. This was a combined jaunt with the San Diego Division group.

Club Room Proposed for Anglers Who Tie Flies and Mold Plugs

Complete reorganization of the Astro Fishing Club is scheduled for a July 29 meeting set for 7:30 p.m. in the Astro executive dining room.

Budz may be reached at ext. 860 for further information.

Camera Bugs Plan Events for August

Astrolens this week announced activities for the next two months among camera "bugs" at Astronautics.

Aug. 10 will find a quarterly contest taking place. Judging will be in both black and white and color. At the same time a membership slide show will be held.

Aug. 23 has been reserved for a beach picnic. On Sept. 14 a "close up" workshop session will be held.

The Astrolens meet in the executive dining room at Astro beginning at 7:30 p.m.

Barbecue and Dancing Featured At First Teen-Age Club Party

The younger generation, Astro's fast-growing Teen-Age Club, did a bang-up job of launching activities at the new CRA recreation area adjacent to the plant July 11 when they held a hayride, barbecue and dance.

The group helped "break in" horseshoe and volleyball courts, while also taking part in softball games. A barbecue dinner was followed by dancing. In the interim a Wells Fargo stagecoach, loaned the group by Roscoe Hazard, merrily toured the area with full passenger loads. Music for dancing was provided by the CRA Band with an assist from guitarists Addie Taylor and Phil Jay. Corrine De Lauer presented several vocal numbers.

Saturday (July 25) will find the group enjoying a 7:30 p.m. dance at the Astro cafeteria. There is no charge for the event, although Directors Dixie Quesenberry, ext. 1111, or Sally Pry HU-8-9431, would appreciate calls from those planning to attend in order to provide adequate

refreshments.

All teen-agers, stag or drag, are invited to participate.

Tentative plans call for a miniature golf party for the evening of Aug. 8.

Astro Band to Hold Rehearsal July 28

W. M. (Buster) Carlson is prepared to lift the baton July 28 at the initial rehearsal of an Astronautics band under sponsorship of CRA.

The rehearsal is slated for 7:30 p.m. at the Astro cafeteria.

Response has been good. Carlson, who will serve as director, indicated this week that a dance band, a combo and a concert band are being considered.

Both men and women are welcome to take part. Carlson will answer questions for those calling ext. 1806.



SIGN SHOP—Astro uses thousands of signs. Most originate here in basement of Bldg. 3 where Maurice Woods, left, and Leonard Smith work.

Satisfying Demands for Signs Full Time Job at Astro Plant

Ever notice how many signs there are at Convair Astronautics?

Not humorous ones like "Thimk" but signs and posters that serve a useful purpose.

Just how many there are in all, no one is sure. However, those who prepare them estimate several thousand are in use.

Most signs at Astro are painted at the plant, although some are done externally. Bulk of the work falls to plant engineering's sign shop in the basement of Bldg. 3.

Two full-time sign painters hold forth there. While many of their jobs require individual hand lettering, they also use silk screen and machine cut stencils. They prepare everything from tiny letters up to some with letters over a foot high.

Exterior signs on paving are done by plant engineering's paint shop.

Many comments have been received from visitors on the unique posters located throughout Astro.

Art work on these is performed by communication department's art section. Printing is done outside the plant. The art section also has galleries of large type and a press for setting up special lettering.

CRA Sports & Recreation Convairity



BEST ATTIRE—These gaily bedecked party goers received prizes for best costumes at Shipwreck party staged last month aboard excursion boat. From left are Baron C. Whitney, Sully Post and Mr. and Mrs. M. C. Mendenhall. Photo by Les Blakely, Astroloens.

Luau Will Be Next Event Planned by CRA Women

A real luau, complete with roast suckling pig, native dancers, native dishes, dancing and all the trimmings is on tap for Aug. 15 under the sponsorship of Astro's CRA Women's Council.

The event will be staged in an outdoor setting near Dana Landing, Mission Bay. Happy hour starts at 6 p.m. At 6:30 p.m. a special ceremony will observe the raising of the roast pig from its underground cooking vault. Dinner follows at 7 p.m. with a full hour of entertainment commencing at 9 p.m. From 10 p.m. until 1 a.m. there will be dancing.

Unfortunately, the caterer can accommodate only 300 persons. Thus, CRA can offer only 300 tickets at \$3.50 each on a first-come, first-served basis. These go on sale tomorrow (July 23) at employee services outlets.

Dinner will be a masterpiece

of island cooking. There will be: relishes and punch (of two types); pua-akalua (roast pig); poi (taro root); moa laiki loloa (chicken, shrimp and Polynesian rice); lamano lomi (pickled salmon bellies); tossed salad; uala kihiki maoli (yams baked underground); hala kihiki (pineapple spear); and cocoanut cake.

Ten entertainers, including both men and women, have been lined up to present a wide variety of authentic island dances, songs and tricks.

Music will be provided throughout the evening.

Suggested costumes are Polynesian or beach wear. Guests are asked to bring along blankets or cushions for seating on the ground during dinner and afterwards.

Jean Bryan, CRA commissioner of women's activities, is in charge of arrangements. Her committees include all members of the Women's Council.



TOAST—New Convair Golf Club champion Al Reiter (on right) puts first place award, a cocktail set, to use at awards banquet July 9. Doing honors is runner-up in championship flight Ralph Long.



AWARDS NIGHT—Flight winners and runners-up (on left) received trophies at July 9 awards banquet staged by Convair Golf Club. In photo at right are: J. A. Batson (Astro), first flight

Weaver's 76 Paces Golf

Scores soared with the thermometer July 11-12 when Convair Astronautics golfers toured the Flying Hills layout.

A 76 was good for low gross in the 0-13 handicap group with Jack Weaver finishing ahead of Jack Abels Jr. and Bill Wray who were one and two strokes back respectively.

Morrie Baxter put together a 78-9-69 total for low net, bettering Gordon Woods' 79-9-70 and C. B. Bagaloff's 83-12-71.

Bill Hoffman posted an 80 for low gross in the 14-19 bracket followed by Jim Long, 83, and Gene Velasquez and J. M. Rayfield who tied with 86s. John Stark and Ed Wright deadlocked for low net with 69s, one stroke better than Alex Bezverkov's 70.

An 88 won the 20 and up category for W. A. Douglas with Jack Berggren, 92, and George Lawton, 93, trailing. Ray Trussell and J. B. Jessop tied for low net with 67s, while Russ Luker posted a 68 for third.

CRA Discount Tickets

The following discount tickets and items are available through employee services outlets:

ASTRONAUTICS DECALS—Emblems suitable for home or car windows, 10 cents.

ATLAS PINS—Replicas of Atlas missile in gold or silver, \$1.30 each. Pinettes in enamel, 60 cents.

ATLAS PICTURES—Poster size color photographs, 25 cents each.

B-58 PICTURES—Poster size color photographs, 25 cents each.

BASEBALL—Padres discount tickets for July 29 game available two days before the game.

DISNEYLAND—Membership cards for discount purchases of tickets to Disneyland.

MARINELAND—Discount tickets, adults \$1.75, children 7 to 17 years, 50 cents.

SKATING DERBY—Special discount passes for each performance, Thursday through Sunday.

SPACE PRIMER—An introduction to astronauts, 10 cents each.

STAR-LIGHT OPERA—Reduced price tickets available starting July 23 for the August 6 and 16 performances of "Where's Charley?"

Divers Will Select Two Team Members

Astro Divers will take to the waters at a site yet to be chosen early next month to select two members for a four-man team to take part in an AAU Summer Dive during August, President Larry Beaver reports.

Bob Nicholas and Joe Walker, by virtue of points garnered at earlier dives, have made the team. Another regular team member, plus an alternate will be selected to represent Astro CRA in the competition.

Over 100 skin divers and their guests were on hand July 7 for a meeting featuring Conrad Limbaugh, chief diver for Scripps Institute of Oceanography. Limbaugh gave a full report on various sharks found in the waters off San Diego.

Play-offs For Softball Crown Set For July 27

Barring an unforeseen play-off series within leagues, Astronautics shop softball loops will send their champions into action next week for the first Astro CRA shop and softball title.

Dept. 556-7 seemed to have the National League title sewed up with only two games to go. The league leaders had won seven games with only a 3-3 tie with Dept. 578-3 to mar their record. Dept. 556-7 further added to its chances last week by besting the second-place Dept. 733 entry in a 16-8 contest.

A high-flying, unbeaten Dept. 591-5 team stood alone in the undefeated ranks as the American League's best possible entry in the play-offs. However, games late last week could have made a difference in the eventual outcome.

If the two leagues come up with undisputed champs, then the play-offs for the crown open July 27. A second game will be played July 30 and the third game, if

necessary, on August 3. A sudden death game would decide loop ties.

The contests will be played in the new CRA recreation area near the Astro plant. Spectators are invited to witness the 6 p.m. games.

Following is a schedule for games during the next two weeks:

NATIONAL LEAGUE

At Linda Vista:
July 23 6:45 p.m. Dept. 733-0 vs. 772-0
8:20 p.m. 578-3 vs. 532-1
July 24 6:45 p.m. 325-3 vs. 220-5
8:20 p.m. 532-1 vs. 772-0

AMERICAN LEAGUE

At Astro:
July 22 6:00 p.m. Dept. 549-5 vs. 597-3
July 23 6:00 p.m. 573-0 vs. 756-0



Astro's Industrial league entry had a one-one record in second half of softball play through games last week.

Astro won a 9-0 game with Convair Manufacturing Control, but dropped a close 3-2 game with Rohr, first half champion.

Gun Club to 'Break in' Walkways For First Time at Shoot Sunday

New cement walkways at the best male and best female entered. Dogs were judged on conformation only.

Judged the best female entered in the show was a German short-hair, "Friday," owned by Manford Davis (Dept. 401). "Kelly," an Irish setter owned by Jack Rogers (Dept. 6), placed first as the best male entered.



At a shoot staged by the Gun Club July 5 contestants from SD and Astro split the honors in half with SD participants taking all three places in the trap event while Astro did the same in the skeet category.

Placing first as the leader of the SD trap contingent was George Clayton (Dept. 115) who broke 25 straight targets. Jay Cushman (Dept. 146) was second and Mary Reuther (Dept. 216) third.

The three skeet winners from Astro were led by Leo Bernitz (Dept. 250), followed by Julian Singleton (Dept. 545) and Hank Johnson (Dept. 321).



INSTALLED—New officers of Convair Golf Club were installed recently at quarterly meeting at Admiral Kidd Officers' Club. They will set up golf activities for both SD and Astro people. From left (standing): F. W. Kelly (SD), outgoing vice president; J. J. Swarts (SD), outgoing treasurer. From left (sitting): H. V. Purnell (Astro), re-elected president for second year; G. L. Dix (SD), incoming vice president; C. W. Maxfield (SD), incoming treasurer; and J. Kenney (Astro), incoming second vice president.

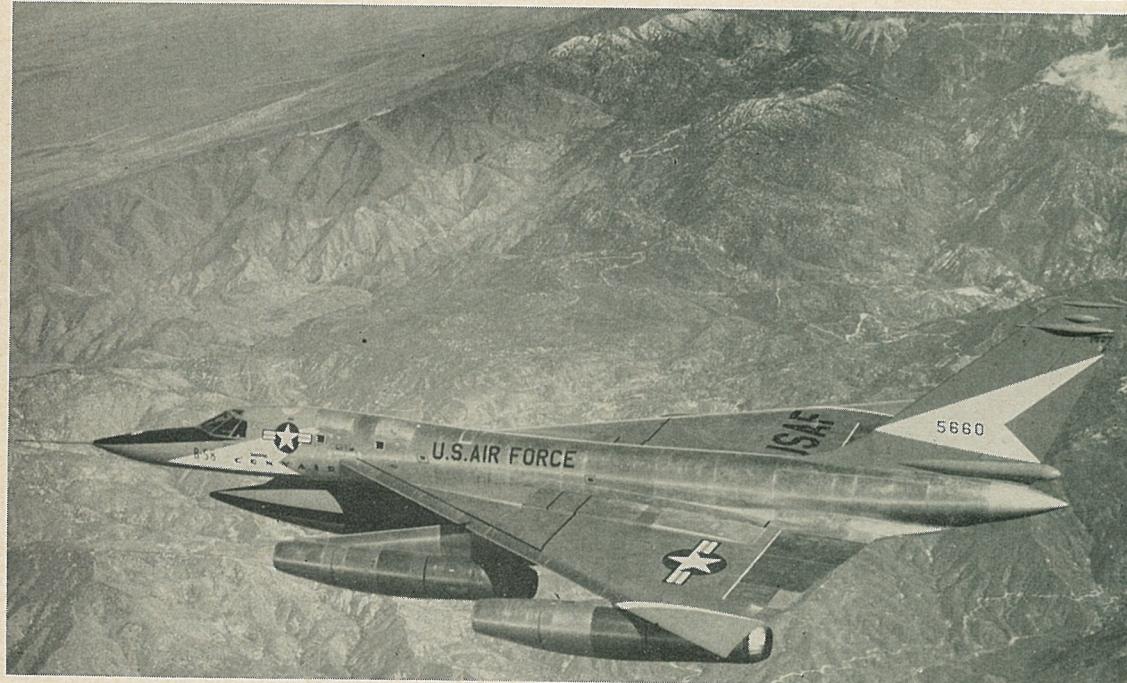


runner-up; Lee Stone (Astro), top woman; Ralph Long (SD), champion; Al Reiter (SD), championship winner; Marian Wierzbicki (SD), runner-up; and Russ Davis (SD), first flight winner.

Baseballers Remain In Loop Contention

Astronautics baseballers, paced by Jim Hammond, Norm Chaudoin and Jerry Woods, continue to remain in contention for championship honors in summer baseball action.

Despite a 6-1 loss to Oceanside, the CRA entry has a commendable 3-2 record for the season. Games are played every Sunday. Local papers list schedules and locations.



OVER ROCKIES—B-58 moves serenely over Rocky Mountains in this beautiful air photo. Even if crewmen had to bail out during war mission over such rough terrain as this, their survival kits would meet virtually every need.

Full Parking Lots Impress Soviet Party

Andrei N. Tupolev, leading Soviet jet airplane designer, spent the July 4 weekend in San Diego this month and with his party toured San Diego Division's Plants 1 and 2.

The visit was arranged by Thomas Lanphier Jr., Convair vice president. It was part of a tour of U.S. aircraft companies. The Convair trip was followed by visits to Lockheed and Douglas.

Lanphier indicated that the doors were opened to Tupolev partly as a means of impressing the visitors with U.S. military might and partly in expectation that American visitors to Russia would receive similar treatment in future.

The visitors showed considerable interest in both the 880 transport and the F-106 interceptor but made no particularly significant comments.

"They seemed impressed by the obvious well-being of our employees," Lanphier said. "Particularly they noted the hundreds of automobiles in our parking lots . . ."

The Russians stayed at La Jolla's Del Charro and were entertained at Kona Kai and in the Lanphier home. One Convair observer, who accompanied them as guide to the Southern California Exposition at Del Mar, was impressed by the Russians' interest in the flower displays.

"They must have taken 1,000 snapshots," he said.

Other observations: the visitors put away big quantities of fruit and fruit juices at mealtimes (evidently rare in Russia); and shunned vodka for Scotch and bourbon.

Only one request stumped the Russians' hosts. A size 44 swim suit — the largest available — didn't even come close to fitting Tupolev!



UNPACKED—Each one a vital item to downed airman, here is how survival kit looks when unpacked.

'Two Bushels Crammed In One' in Survival Kit

Air Force B-58 crewmen forced to bail out on a strategic mission will find they've got just about everything they need when they reach the ground.

This includes a life raft, a rifle and cartridges, matches, a compass, rations, a signal mirror and two-way radio.

"And that's only the start," says Max Martin, furnishings group design engineer.

"Depending upon the mission—and the territory to be covered—the Air Force would add a number of other items in case they might be needed."

What's more, all the vital gear fits like a two-layer jigsaw puzzle inside a rugged plastic box only seven inches deep, 16 inches wide and 22 inches long.

"In fact, it's a stock joke in furnishings that two bushels of stuff go into a one-bushel container," said Martin.

In service, when a crewman bails out, he automatically takes the survival kit with him. If over water, the crewman would trigger a device which automatically opens the kit, drops the

life raft and inflates it before he hits the water.

Once aboard the raft, he would find in the kit the items listed above, and others he might need: a net to catch fish, heat tablets, first aid kit, a canteen with water—and a razor with 10 blades!

There'd also be a de-salting kit to use when the water ran out, a fishing kit—and a manual on what to do and how to do it to survive until rescued.

For missions over cold or arctic regions, the kit would contain ski goggles, wool ski socks and a sleeping bag which would protect the crewman to 30 Fahrenheit degrees below zero.

"The Air Force in planning the survival kits has taken into account most everything that a man might reasonably expect to carry aboard a fighting aircraft," said Martin.

"Unlike some nations, we consider our crews definitely NOT expendable, and we do everything possible to assure their safe return—even if the aircraft is lost."

New Table and Bench Units Serve Lunchers

Convair Astronautics employees at the main plant were enjoying new lunch-time conveniences this week in the form of new table and bench units.

They are being placed outside buildings in areas where Astro mobile lunch wagons are located. Thirty units were to have gone into service last week. Thirty additional units will be in service soon.

52-in. Rattler Bagged With Single Arrow

Dick Golem, a Dept. 452 apprentice at Convair Astronautics, came home with an unexpected bag July 10 when he went after rabbits with a bow and arrow near his Palomar Mountain home.

Stalking, Golem came within two feet of a 52-inch rattler. He dispatched it with an arrow and counted 12 rattles and a button.

Lab Offers to Perform Precision Optical Work For Other Divisions

A new service is being offered by a newly-expanded group within Convair San Diego electronics sub-department of engineering.

The optical and infrared facilities of electronics are now equipped to turn out precision optical work for other departments at Convair SD, other Convair divisions, or outside companies.

Romuald Anthony, design specialist in charge of the group, explained, "The value of optical instruments for special tooling purposes and the use of infrared techniques in research and experimentation is becoming of increased importance in industry."

In the group's optical shop, set up on the first floor of Bldg. 51 at Plant 1, lenses and mirrors are designed and fabricated to a high degree of precision. In fact, Anthony said, surfaces can be made accurate to one-twentieth of the wave length of light over a diameter of 12 inches. Prism angles can be fabricated to an accuracy of a one-second arc which is equal to the shift of vision in the blink of an eye looking at a point 20 miles away!

The shop is equipped with the only precision infrared optical bench in the country for checking out errors in infrared or visible optical systems.

"Infrared is that portion of the spectrum which falls between the visible and microwave area and is used to bridge the gap between vision and radar. Infrared radiation can be transmitted through materials impervious to visible light. Like radio waves it can travel in a vacuum as well as through air," said Anthony.

A dark tunnel, 150-ft. long, is being readied on the second floor of Bldg. 51 for testing an infrared fire control system designed for the Convair-built F-106.

"We hope soon to be using an infrared system as a welding monitor," Anthony continued. "With infrared radiation measuring temperature differences, we can determine characteristics of welds and castings and convert the temperature information to black and white film for permanent record."

Microwave, radar, thermodynamics, and manufacturing development are among groups at Convair SD and Astronautics who are availing themselves of services offered by the optical and infrared facilities group.

It is grinding metals to be used as standards in inspection, fabricating new materials for experimental purposes, and planning the application of optical techniques to design of radar antennas and receivers.

One of the group's most recent accomplishments was the design and fabrication of a "schlieren" system, the optical portion of the Convair ballistic test section being used at Ames Laboratory, Moffett Field, Calif., for study of shock waves. The unit can take pictures of shock waves from a ballistic missile traveling at 20,000 feet per second. It is enabling the team of Convair researchers to "see" the effect of

the shock on microwaves and to get an actual pictorial record of the wave itself.

The portable unit is said to be one of the first of its kind, and probably the largest, in use for this type of testing.

The optical and infrared group now consists of eight men in addition to Anthony, all experts in their fields. Four men work in the optical shop, two in research, and one each in optical design and infrared systems. "Every one of our men has had a wide background in optical systems work and research, making it possible for us to offer our services in a highly technical field. We feel that the application of new optical and infrared methods will become more and more important and necessary for accurate instrumentation, data recording, and production control," Anthony said.

New Courses Assist Exam Preparations

Two new courses to assist Convair employees interested in preparing for exams given by the California Board of Registration for Civil and Professional Engineers are on tap in San Diego.

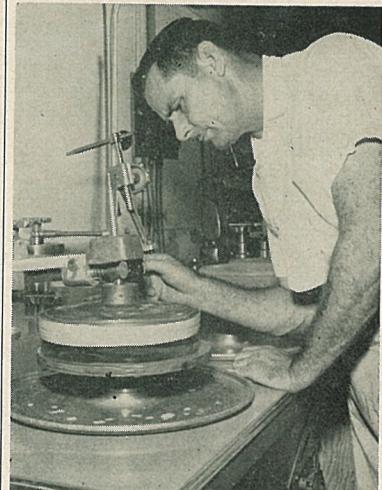
They open Aug. 4 and 6 for a 15-week period under the sponsorship of the University of California Extension service. One will be taught by James B. Herreshoff, Convair SD design specialist.

Interested students may apply for information on the "Fundamentals of Engineering" courses at the Extension office or obtain data through Convair educational services offices at SD and Astro.

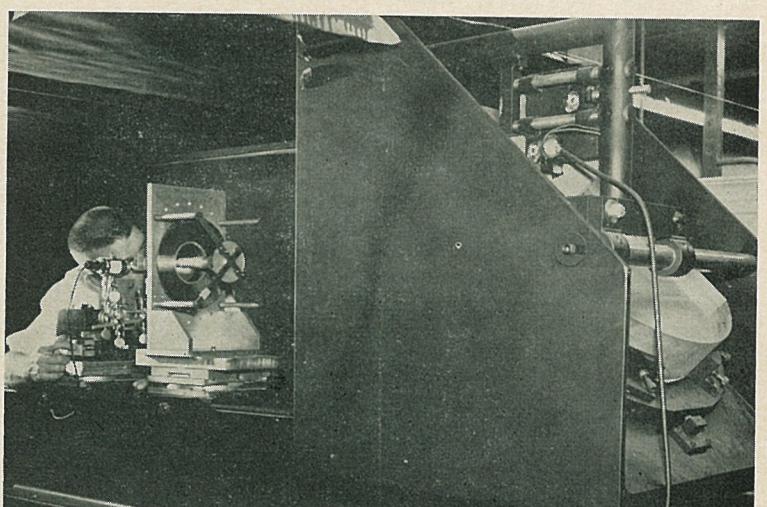
Association Elects Pomona's Overturf

Convair Pomona's Jack C. Overturf (Dept. 6) has been elected president of the Orange Belt Chapter of the Systems and Procedures Association for the 1959-60 club year.

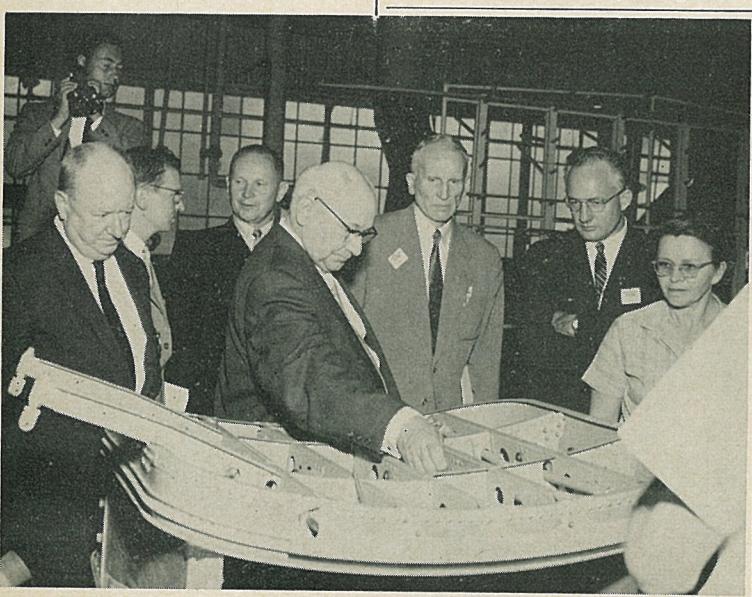
Overturf is a systems analyst in the engineering procedures group.



LENS POLISHER—H. C. Hall polishes large optical lens on one of polishers for precision work in Convair SD optical shop on lower floor of Bldg. 51.



OPTICAL CHECK—F. H. Vogler uses precision infrared optical bench at Convair SD for testing out errors in optical systems. Bench is said to be only one of kind in country.



ON TOUR—Visiting Russians were guests at SD Division plants this month. From left, A. P. Higgins, manager of military relations at SD; Evgeny Kutovoy, interpreter; Sergei Yeger; Andrei Tupolev; Alexander Archangelski; Col. Charles Taylor; and Anna Vinson, SD Dept. 133. In foreground is 880 forward cargo door.



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

Convairiety

Vol. 12, No. 26

Tuesday, December 22, 1959

SAN DIEGO, POMONA, ANTELOPE VALLEY, VANDENBERG AFB, CALIF.

Astronautics
EDITION

Convair Astronautics central news office, Bldg. 8, San Diego plant, ext. 3322. For news contacts at other Astro facilities, see page 2 masthead.

AFMTC, CAPE CANAVERAL, FLA., FORT WORTH, TEX.



New Ballroom Selected For Jan. CRA Dance

Astronautics CRA will be seeking "more room" Jan. 16 when it stages the initial monthly dance of 1960 at the refurbished Pacific Ballroom, downtown.

Tickets for the event are now available through employee services. They are 75 cents per person.

One of the most popular activities staged by Astro CRA, the monthly dances held during the last quarter of 1959 have all drawn "turn away" crowds. CRA refuses to sell more tickets than house capacity as a convenience to those attending. Tickets available for previous dances have been exhausted soon after being placed on sale.

Buster Carlson, leader of the popular Astro Band which plays for each CRA dance, has endorsed the new location.

"The acoustics are good, the dance floor large and the sound system has been recently updated," Carlson said. "You couldn't ask for a better site."

Pacific Ballroom is located on Broadway between 11th and 12th streets.

F-106 Reaches Speed of 1,525 mph In Race With Time at Edwards

A U.S. Air Force F-106, flying from Edwards AFB on the Mojave Desert, last week set a new world speed record of 1,525.45 mph over a straightaway course at 40,550 feet.

Maj. Joseph W. Rogers, ADC pilot, beat the previous world mark of 1,404 mph (set by a F-104) by 121 miles. He also exceeded the record of 1,483 claimed by the Soviet Union.

The F-106 flown by Rogers was a regular production model, built at Convair SD. It was instrumented and configured to

New Assignments in GO to Better Coordinate Transport Efforts

Several new assignments of responsibility in General Office, aimed at better coordinating transport systems sales efforts, were announced this month by President Jack Naish.

R. C. Sebold, vice president-engineering, has been given overall responsibility for coordination among operating divisions of Convair and C. L. Blake, has been appointed transport systems development manager, reporting to Sebold.

"A major part of our business in the past has been building airplanes. Now, the inroads of missile weapon systems leave only the area of transportation systems where we can feel fairly certain that airplanes will continue to be built. As a result, I wish to greatly increase our efforts in the transportation field on a coordinated basis."

Blake, a native of Nashville, Tenn., holds degrees in aerodynamics from Louisiana State University. He joined Convair first in engineering at SD in 1941, left to take an executive post in the Office of Secretary of Defense in 1951, returned in 1954 to Convair as a staff engineer in General Office.



C. L. Blake

systems and our Pomona operating division is developing an increasing capability in air traffic control . . . We must insure that the combined efforts of these operating divisions are compatible to the end that we do the very best job possible to obtain new business."

Blake, a native of Nashville, Tenn., holds degrees in aerodynamics from Louisiana State University. He joined Convair first in engineering at SD in 1941, left to take an executive post in the Office of Secretary of Defense in 1951, returned in 1954 to Convair as a staff engineer in General Office.

★ ★ ★

With Convair's commercial jet program at an "extremely vital stage with respect to future sales activities," President Jack Naish has appointed C. L. Meador acting director of contracts in General Office "in order that the vice president-commercial sales and contracts (J. G. Zevely) may direct his undivided attention toward the sale of commercial aircraft during this period."

Meador, who has been contracts manager, will have overall responsibility for negotiating sales contracts, acting through operating division contracts departments as necessary.

A Missourian, Meador came to Convair SD in 1940, moved to Convair FW in 1942 in estimating, served in the U. S. Army from 1944 to 1946 when he returned to Convair SD in contracts, first as an executive assistant and then as contract coordinator. He shifted to General Office in 1953 as assistant to the contracts director.

C. L. Meador

Merry Christmas To All Convair

"It is my sincere wish that the approaching holiday season will be both joyous and memorable for members of the General Dynamics family everywhere."

"I am certain that your achievements during the year now ending have played a significant role in making it possible for the nations of the free world to celebrate another secure and Merry Christmas, and to welcome the new decade with hope and confidence."

Frank Pace Jr.
Chairman of the Board.

* * *
This week we pause in our daily endeavors to celebrate the birthday of the Prince of Peace.

It is a time of rejoicing and gift-giving. In our celebration, however, let us remember the true meaning of Christmas, and may His Spirit be in your homes and His teachings continue to bring tolerance and understanding in a troubled world.

J. V. Naish,
President of Convair.

Xmas Funds From Astro To Aid Needy

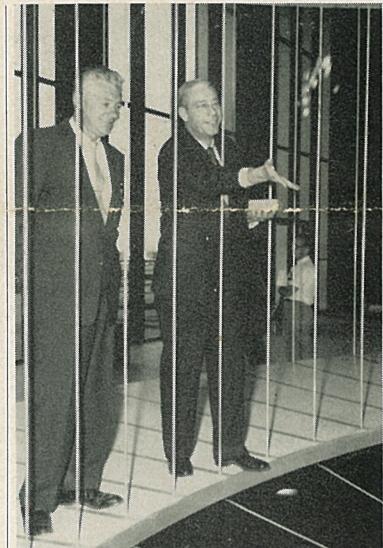
Generous Astronautics folk, both in San Diego and at bases and facilities elsewhere, are sharing with the less fortunate this Christmas season.

More than 80 needy families, most of them with six or more members, will benefit, as a result.

Largest single effort was the annual Christmas party for needy children last Saturday at the Astro cafeteria at San Diego. It attracted 145 youngsters from 50 families. They dined, played games and watched entertainment. There were shoes for each, clothing and toys.

Behind the party was a concentrated effort from several groups. Employees' Con-Trib-Club advanced \$2,500. The Salvation Army picked the needy children. The Prophet Co. donated food and Christmas tree. Prophet employees served and Astro

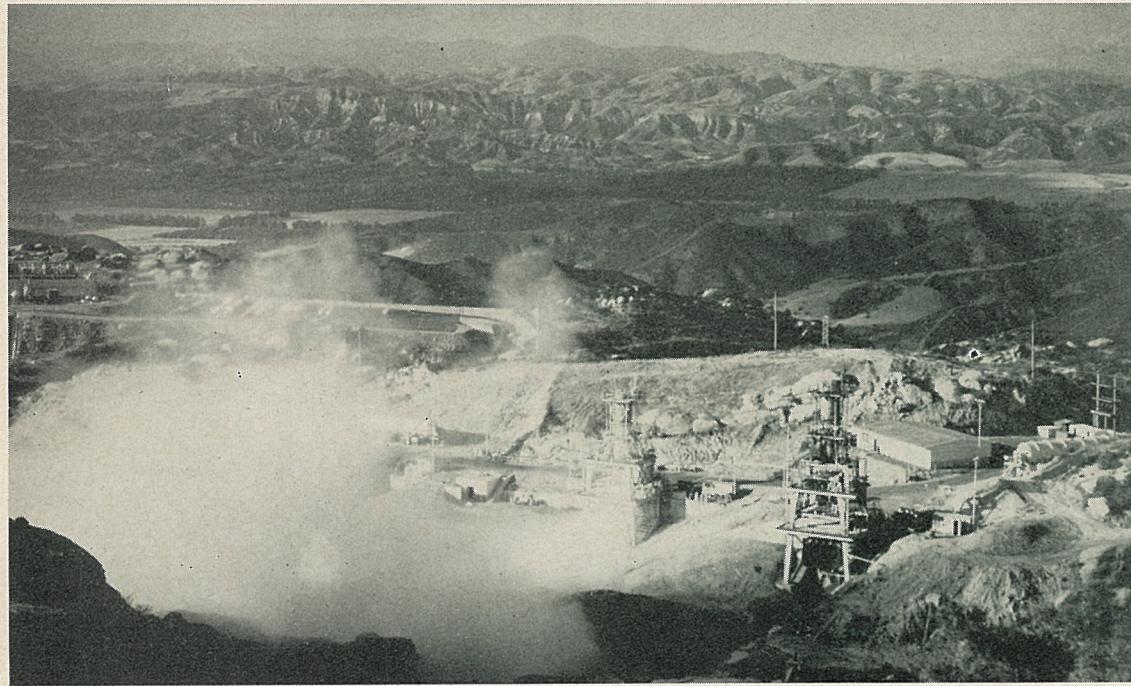
(Continued on Page 2)



GOOD CAUSE—Members of Astro's general safety committee who were tardy or absent were "fined" during year and "kitty" went into Astro reflection pool last week to help needy. Here J. P. Hopman, factory manager, makes with heave-ho while J. W. Garrison, chief safety engineer, looks on.



ABOUT READY—Lorraine Sem of Astronautics security makes attractive chef as she bastes turkey being prepared for Convair San Diego and Astronautics employees tomorrow in plant cafeterias, for special \$1 holiday meal. Christmas dinner at SD Plants 1 and 2, and Astro will give choice of turkey or ham.



AWESOME—These are test stands in Santa Susana mountains where mighty rocket engines are test run. Among them are engines for Atlas missiles.

Atlas Engines Roar in Checkouts Scant 35 Miles From Downtown LA

BY BRYAN WEICKERSHEIMER
(Convairiety News Editor, Astronautics)

CANOCA PARK, CALIF. — High above this west San Fernando Valley community, only 35 miles from downtown Los Angeles, rocket engines for the Atlas missile receive their first "workout."

Test stands, anchored in natural rock formations, hold the engines in place while they run for a few seconds or a few minutes, depending upon programming.

Called the "propulsion field laboratory," the site is operated by Rocketdyne, a division of North American Aviation, Inc. and an Atlas program associate contractor. Rocketdyne owns the site jointly with military agencies.

Within a 1,700-acre site Rocketdyne has assembled the greatest array of high thrust engine test facilities in the nation. Through these same Santa Susana mountains the old Butterfield stage line once passed and California's famed bandit, Joaquin Murietta, hid out from lawmen. The area contains many towering rocky cliffs and canyons. Deer and other wild animals feed amidst hillsides blackened by engine exhausts.

A natural valley stretching some three miles contains 19 major test stands, four major component test laboratories and a bevy of administration and support buildings.

Although smaller in size, test stands look much like those Astro uses to test Atlas missiles at Sycamore Canyon. Single engines or clusters are tested at one time. Normally, several test stands are grouped together and



AT ROCKETDYNE — At left is Astronautics representative at Rocketdyne, Henry Palan, lead propulsion design engineer. At right is E. B. Monteath, Rocketdyne's Atlas program manager.

controlled from a single blockhouse. They are designated by such terms as Alpha, Bravo, Co-coco, etc. Fuel and water tanks stand on nearby hilltops. Access to each area is controlled and winking red, amber and green lights signify conditions at the test stand. Sirens warn of pending runs.

In addition to Atlas engine tests, Rocketdyne utilizes the area for tests on engines for the Thor and Jupiter missiles, plus various research projects.

The present Atlas propulsion system is known as the "MA-3."

It is a later version of the "MA-2" and earlier "MA-1" first developed for the Atlas in a program that goes back to 1954. The first propulsion system was turned over to Astro in June, 1956.

"MA-3" consists of a twin-chambered booster engine generating 300,000 pounds of thrust. This unit lifts the Atlas and sends it rocketing along on the first stage of its journey. A sustainer engine of 60,000 pounds thrust is ignited upon launch and continues to propel the Atlas after the booster has been jettisoned. It is designed to function in the thin air of higher altitudes. Twin verniers complete the power package and provide roll control.

Rocketdyne once fabricated the complete propulsion system here at Canoga Park in a modern factory. However, the "MA-3" work is being divided, with the booster being built at a Neosho, Mo., plant of Rocketdyne and the remainder here at Canoga Park.

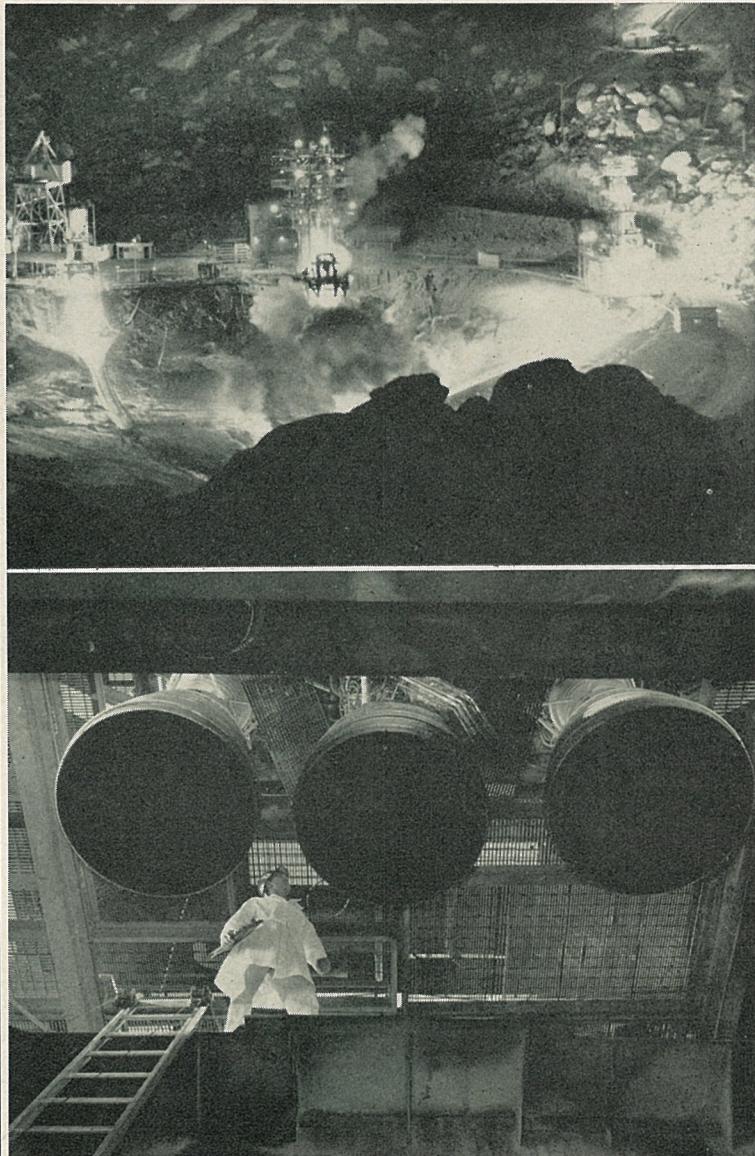
Side-by-side assembly lines turn out Rocketdyne's various propulsion systems. Atlas engines ride toward completion on special assembly fixtures, passing through a series of stations where sub-assemblies are affixed. One noteworthy area turns out the unique thrust chambers which must be cooled during flight to withstand temperatures of over 5,000 degrees. This is done by passing the Atlas' RP-1 fuel through hollow tubes which form the chamber walls and back to the combustion chamber for burning.

Once completed, engines are subjected to a series of special checkouts prior to being sent "up the hill" to the field laboratory. Following actual runs, the engines are returned to the factory for clean-up and loading aboard special trailers for the trip to Astro.

Representing Astronautics at Rocketdyne is Henry Palan, a lead propulsion design engineer. He administers all present and future programs, sits in on meetings and acts as liaison in all Astro matters. One of his closest contacts is E. B. Monteath, Rocketdyne's Atlas program manager.

In turn, Rocketdyne maintains a staff at Astronautics of about 38 people headed by Ed Strain, field service representative in charge. In this group are instructors, modification mechanics and engineers. In addition, other Rocketdyne employees are assigned to off-site locations.

Some of the projects talked of here tax even the most imaginative. For instance, a single chambered engine now in development would produce 1½-million pounds of thrust. And in the future, engineers speak of engines powerful enough to lift a Navy light cruiser or place a 300,000-pound satellite into orbit. This within the next 25 years!



CLOSEUP—Top photo: this remarkable shot of missile engines running is actually three shots in one. Stands actually were not all three running at same time, but photographer made it appear so by using time exposure. He closed shutter when one stand shut down, opened it when another fired up. Lower photo: business end of Atlas engine. Primary units are two boosters at right and left. Center is sustainer.

System of TV Close-ups Checks Parts for Size

Convair San Diego is using the principle of a TV "close-up" as part of a new inspection method for tools, parts and assemblies that is expected to cut in half the time formerly required for many measurements.

The new system permits measurements to be taken in two planes without moving the part being inspected. Previously, inspection had been limited to a single axis checking procedure, typical of which is a height gauge on a surface plate.

The new universal inspection machine is the only known one of its kind, and was designed and built at Convair SD, according to quality control engineer A. G. "Al" Blakey, who was project engineer.

Actually, the basic structure is a converted lofting table, equipped with close tolerance checking scales. The part to be examined is placed on the bed. A lens capable of magnifying parts approximately 15 times is positioned over

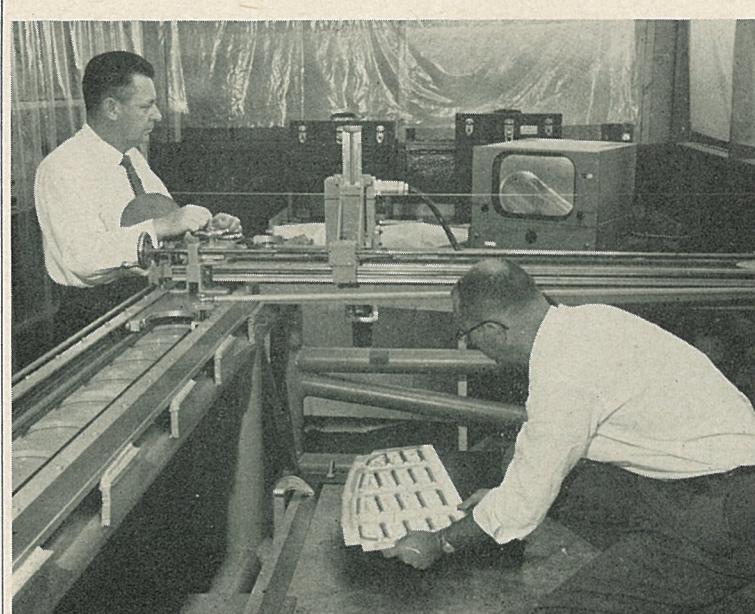
the part and the operator looks at a closed-circuit TV monitor which enables him to see exactly where to start (and end) his measurement.

The lens apparatus moves on tracks in both X and Y planes, thus permitting the reading of two axes without moving the part.

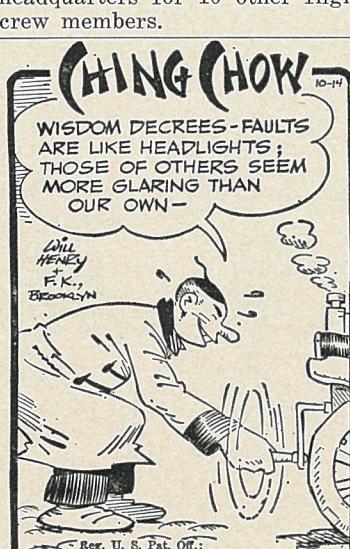
Blakey said that the principle of the unit can be expanded into automatic inspection methods to cope with increased production.

At present, the manually-operated unit is enabling inspection departments to cope better with machined parts, particularly first-part checks from numerically controlled machines. In addition to measuring full parts (up to eight feet by four feet), it can also measure dimensions of embossed areas.

Development of the universal inspection machine is the result of combined efforts of manufacturing development, tooling and quality control departments.



BIG PICTURE—A. G. Blakey (left), SD quality control engineer, and Lloyd Brenn (SD Dept. 288) demonstrate principle of new universal inspection machine recently completed at Convair SD's Plant 2. TV monitor arrangement permits operator to measure parts in two planes.



New Dispatch Boards to Show Arrivals, Departures of Planes

New dispatch boards are going up in Convair San Diego's flight operations office to replace the old-type blackboards.

The new boards of masonite and plexiglass are designed from plans used at Convair Fort Worth when similar boards were installed there earlier this year. Two boards, 5x8 and 4x7 feet, will be erected in the flight dispatch office on second floor Bldg. 4 at Plant 1. One will schedule all Convair plane arrivals and departures, including test flights of Convair 880s, and the other will be used for status of plane production.

Dispatchers will use grease pencil on the glass boards for better visibility. R. E. Flanery heads the office as chief dispatcher assisted by Loren Blackburn.

In other remodeling now in progress, a new counter and rail have been placed around the flight dispatch office to provide more space in the aisle.

A new shower and locker room has been built for Convair SD

NEWS FROM OTHER DYNAMICS DIVISIONS

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair Limited, of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., aircraft, missiles, and space systems.

Electric Boat of Groton, Conn., submarines.

Stromberg-Carlson, of Rochester, N. Y., telecommunications, electronic equipment.

Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.

General Atomic of San Diego, Calif., nuclear research, development, production.

Electro Dynamic of Bayonne, N. J., electric motors, generators.

* * *

Canadair Demonstrates 'Forty-Four' in Flight

MONTREAL — The Canadair "Forty-Four" last month was demonstrated in flight for the first time to a group of high-ranking service officers and government officials which included Air Marshal Hugh Campbell, C.B.E., C.D., Chief of Air Staff of the Royal Canadian Air Force.

At the controls of the Forty-Four were W. S. (Bill) Longhurst, chief pilot of engineering flight test, and co-pilot G. T. (Scotty) McLean. Favorable comment was made on the evident ease of handling of the airplane and on the quietness of its four Rolls-Royce Tyne turboprop engines.

A preliminary test flight took place Nov. 15 as a result of successful taxi trials and the Forty-Four was airborne for 2 hours 10 minutes. The airplane has now entered a comprehensive flight test program which leads to Canadian (Department of Transport) and American (Federal Aviation Agency) type-certification.

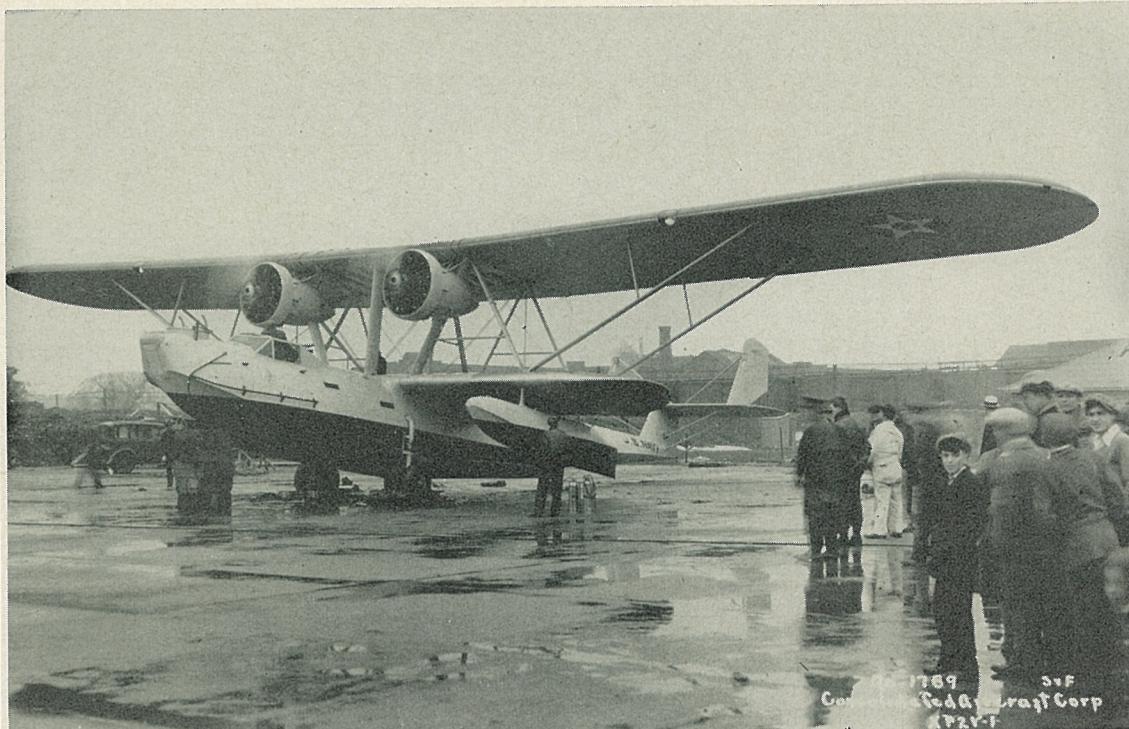
The airplane demonstrated was the first of 12 side-loading long-range transport aircraft for the Royal Canadian Air Force. Also on the production line are the

first swing-tail commercial freighter airplanes which are being sold to cargo-operators and airlines the world over. Already, the Forty-Four has been purchased by three operators in the U.S.A.

The Canadair Forty-Four at present has a maximum take-off weight of 205,000 lbs. and carries a payload of over 65,000 lbs. more than 3,000 miles with full fuel reserves. Alternatively, up to 189 passengers can be accommodated. Later versions with payloads up to 100,000 lbs. are already being planned. The wing span is 142 ft. 3 in. and the fuselage length is 136 ft. 8 in. Total cargo volume is 7,250 cu. ft. and the cabin length is 98 ft. 7 in.

Four 5,730 e.h.p. Rolls-Royce Tyne turboprop engines drive 16-ft. diameter de Havilland propellers to power the Forty-Four at speeds up to 400 m.p.h.

It is expected that, by the time the Forty-Four goes into airline operation early in 1961, the nominal overhaul period for the Tyne engine will be 1,000 hours. By 1962, the engines will have been developed to a rating of 6,500 e.h.p. Canadair is tailoring the airplane to take this increased power.



THIS WAS XP2Y-1—An improved version of Navy XPY-1 (Convairity, July 22, 1959) was XP2Y-1 which found favor with U. S. Navy and brought production contract to Consolidated Aircraft in 1932.

Salaries, Wages Cut in Early 30s As Consolidated's Sales Lagged

(With this installment, Convair's continuing history of Convair returns to Consolidated Aircraft after reviewing accomplishments of Thomas Brothers and Thomas-Morse prior to their acquisition by Consolidated. Howard O. Welty, who researched this history, calls this 1930-1935 period: "Austerity With Honors.")

Consolidated's history through the early 30s paralleled that of most aircraft manufacturing firms in the depression years. There were exciting new developments in the art and science of aeronautics, but not much to mail the stockholders.

The collapse of sales did not come at once. At the end of 1930, Reuben Fleet, Consolidated's president and founder, informed stockholders the company had delivered more airplanes in number (309) and in total value (\$4,345,170) than any other individual aircraft manufacturing unit in America. But he noted that the net profit equaled only 3 per cent of the entire volume of sales, and observed this was entirely too low for so hazardous a business.

Consolidated sold 133 planes the next year and reported an operating loss of \$177,449. The low point was reached in 1932, with sales fewer than 100 aircraft and a loss of \$318,947. Salaries and wages were cut 20 per cent. Navy flying boat business and a series of foreign orders for the Fleet trainer quickened the production tempo in 1933-34. Governments ordering trainers included Rumania (20), Portugal (5) and the Republic of China (30).

While the plant was finishing production of the Commodores, I. M. Ladd, Consolidated chief engineer, turned to designing an improved version of the Navy XPY-1. The 100-foot span was retained but a "sesqui" (less than half size) bottom wing was substituted for the horizontal struts that joined hull and floats in the earlier models. Riveted alloy fuel tanks were built into the wings for a saving in weight, and there were other improvements.

The Navy liked the design, Fleet leased additional floor space, and the prototype was ready to fly in March, 1932. A contract for 23 production models followed.

The long, cold winters were a severe handicap for a flying boat firm operating at Buffalo, N. Y. The XP2Y-1 was erected outdoors on a concrete apron adjoining the ramp of the new Buffalo Marine Airport, but even in late March it was a nip-and-tuck affair to

beat the weather. A takeoff was decided upon March 26, when the wind blew drifting ice to the far side of the harbor. But a hurried landing was required 32 minutes later when the wind shifted.

A fortnight later the weather still was uncooperative. On April 14 Pilot William Wheatley, Ladd, and a Navy inspector took the boat aloft with the intention of delivering it to Washington. After six hours of hither-and-yon flying in a search for a lane through the low overcast, the plane returned to Buffalo; the instrumentation and flying aids of the period made it unwise to bore up through thick weather and fly to a hidden destination.

The plane landed, but ice blown in shore blocked the ramp. Lawrence Bell, a Consolidated vice president, called Buffalo firemen, but they were unable to open a lane. The boat lay offshore at anchor until 10:30 p.m. when a passageway opened up.

"Luckily," Ladd recalled in later years, "I had a small bottle of something along and we all came ashore warm."

TRAINING PANELS GIVEN TO JAYCEE

Obsolete Convair SD aircraft training panels are now being put to good use in San Diego Junior College classrooms.

H. W. Rubottom, chief of SD educational services, said that 22 of the panels which diagram systems of the F-102 have been donated by Convair to the school's aircraft department.

Since the panels were outmoded as far as use at Convair was concerned, and in storage, the company decided to pass them on to the school for training purposes. The portable and compact panels diagram actual aircraft systems of the F-102.



"He claims that while he was at work all th' streets in his town were made into one-way streets and he has been two months tryin' to find a way back home. . . ."

IN FLIGHT—This is Canadair "Forty-Four" turboprop transport. A new "wrap-around" windshield has been designed for it with improved visibility.

Eisenhower Triggers TRIGA Reactor at Exhibit in India

NEW DELHI, India—President Eisenhower pressed a button to put in operation a TRIGA atomic reactor in the climax to the formal opening of the United States Exhibit at the World Agriculture Fair here this month.

Accompanied by President Rajendra Prasad of India, the President termed the reactor start-up a "really beautiful sight" as he witnessed the reactor's blue glow on attaining its steady-state operating level of 100 kilowatts.

The TRIGA reactor, developed

by General Atomic Division for applications in agriculture, medicine, training, research and isotope production, was chosen by the United States Government to be an operating feature of the New Delhi exhibit. Indian and American scientists are using it in experiments and research with isotopes benefiting agriculture.

After watching the reactor for some moments, Eisenhower shook hands with Dr. Frederic de Hoffmann, president of General Atomic. Eisenhower complimented de Hoffmann on the TRIGA exhibit and was told that TRIGAs are in use or soon will be in operation on five of the six continents of the world.

When he left, the President carried away with him a certificate signed by de Hoffmann attesting his "experience" as a reactor operator.

Eisenhower laughingly said, "I am getting to be quite an atomic operator. Now I have turned on three of these." He referred to the United States reactor exhibit at Geneva in 1955 and a research reactor at the University of Pennsylvania.

'Little Joe' Leaves FW For Edwards AFB

"Little Joe," B-58 Hustler No. 22, has left Convair Fort Worth for Edwards Air Force Base, Calif., where it will perform high gross weight landings and performance tests.

"Little Joe" leaves a record of many accomplishments during Fort Worth tests, including the first low-level, cross-country flight to Edwards.

It will remain in California about three months.

New VPs Named To Two Posts At S-C Division

ROCHESTER—Two new vice presidents have been appointed at Stromberg-Carlson Division.

Arthur J. Hatch has been named vice president and general manager of special products division. Kenneth M. Lord has been appointed vice president and general manager of electronics division.

As general manager of the special products division, Hatch will direct production and marketing of Stromberg-Carlson's line of high fidelity components and stereophonic component ensembles, intercommunication and sound distribution systems, automobile radios and a variety of other products.

He succeeds Anthony G. Schiino who has resigned to join Rochester Radio Supply Co.

Lord has been director of engineering of the electronics division since 1958. Products of the division include a broad variety of electronic equipment and systems for military and commercial customers.



RECORD—Jane F. Dunn, SD cashier, last week became the first woman in Convair's history to complete 35 years service. Present for official recognition of the occasion were, from left: Dorothy Graham, Anne Filip, H. E. Pasek, D. C. Burrows, SD controller (who presented appropriate emblem and gift of her choice), Jane, J. D. Milling, Catherine Chase, Carol Ulrey, R. C. Welch, Jane Dulong, A. W. Morgan, Kay McCutchan.

Log Book Entries

Promotions

ASTRONAUTICS
Promotions to or within supervision effective Dec. 7:

Dept. 181-2, Project Planning and Methods: To factory methods asst. supervisor, T. R. McCollough.

Dept. 250-9, Plant Engineering: To asst. foreman, M. L. Goolsby. To foreman, J. A. Salyer.

Dept. 305-0, Support Planning and Control: To support planning and control supervisor, W. W. Johnson. To support task control asst. supervisor, C. P. Nungezer.

Dept. 321-7, Support Engineering: To field services asst. supervisor, H. G. Nulton Jr.

Dept. 327-1, Support Documentation: To parts documentation asst. supervisor, L. E. Hurley.

Dept. 343-1, Support Manufacturing Control: To manufacturing control asst. supervisor, C. W. Washam.

Dept. 551, Electronics: To asst. electronics group engineer, B. G. Anderson, E. W. Bush, T. H. Scholder.

Dept. 772, Electronic Manufacture and Checkout: To asst. foreman, R. R. Brumfield.

Dept. 773, Missile Checkout: To asst. foreman, D. E. Weisbach.

FAIRCHILD AFB

Dept. 613, Convair Operations: To chief of operations-support, H. L. Sterling.

MSTS

Dept. 575, Convair Operations: To chief test conductor, R. A. Clark. To GFE asst. supervisor, R. L. Dougherty.

OFFUTT AFB

Dept. 612, Convair Operations: To manufacturing control foreman, J. P. Sullivan. To receiving & stores asst. foreman, I. M. Swain.

SYCAMORE

Dept. 573-3, Convair Operations: To asst. foreman, D. W. Hauenstein.

VANDEBERG AFB

Dept. 576-6, Convair Operations: To asst. foreman, manufacturing control, G. T. McGavern.

WARREN AFB

Dept. 611, Convair Operations: To manufacturing control asst. foreman, B. O. Burris. To foreman, C. V. Cantarini, A. L. Hoy, J. F. Wilson. To inspection asst. supervisor, S. D. Haas. To general foreman, W. L. McBride. To asst. foreman, R. E. Parker, K. W. Parks, C. Rayko, W. B. Swindall, F. F. Troffer, D. L. Turner.

Service Emblems

ASTRONAUTICS

Service emblems due during the period Dec. 16 through Dec. 31:

Twenty-five-year: Dept. 250-1, F. S. Webster.

Twenty-year: Dept. 212-3, J. B. Gering; Dept. 539-9, G. S. Oliver.

Fifteen-year: Dept. 150-0, C. R. Walker Jr.

Ten-year: Dept. 220-3, Doris M. Juan; Dept. 322-1, Ann S. Cook.

AFMTC

Ten-year: Dept. 571-3, K. D. Clopton.

Births

ASTRONAUTICS

BABB—Son, Robert Allen, 9 lbs., born Dec. 4 to Mr. and Mrs. Lonnie Babb (Prophet Co.).

BRONKEMA—Daughter, Karen Beth, 6 lbs., 6 oz., born Nov. 4 to Mr. and Mrs. Leonard Bronkema, Dept. 579-5.

HAMPSHIRE—Son, Daniel Lee, 7 lbs., 3 oz., born Dec. 4 to Mr. and Mrs. David Hampshire, Dept. 532-4.

HARRIS—Daughter, Linda Eileen, 6 lbs., 7 oz., born Nov. 7 to Mr. and Mrs. Julian R. Harris, Dept. 321.

KERESZTURY—Son, Wayne Carl, 6 lbs., 3 oz., born Dec. 8 to Mr. and Mrs. F. C. Keresztruy, Dept. 270-4.

KNIGHT—Son, Gary, 7 lbs., 3 oz., born Nov. 15 to Mr. and Mrs. C. G. Knight Jr., Dept. 214-3.

MCDONALD—Daughter, Roxanne Marlene, 6 lbs., 8 oz., born Oct. 28 to Mr. and Mrs. John F. McDonald, Dept. 775.

MIXON—Daughter, Cheryl Diane, 7 lbs., born Nov. 10 to Mr. and Mrs. Randolph Mixon, Dept. 549-3.

SIEGEL—Son, Victor Jay, 7 lbs., 1/2 oz., born Oct. 29 to Mr. and Mrs. Bernard Siegel, Dept. 579-5.

WRIGHT—Daughter, Eileen Dawn, 6 lbs., 1 1/2 oz., born Nov. 24 to Mr. and Mrs. D. R. Wright, Dept. 270-3.

VANDEBERG AFB

MOORE—Son, Gerald Francis, 8 lbs., 15 oz., born Nov. 1 to Mr. and Mrs. G. J. Moore, Dept. 576-6.

Two Convair Teams To Enter Hoop Play

Two basketball teams from Antelope Valley Convair facilities will be entered in league play as it swings into action after the holidays, announced Al Striplin, CRA commissioner.

Convair will be represented by one team from Palmdale and one from Astro MSTS, Striplin said. Sixteen teams from Antelope Valley will play in the tournament under supervision of Los Angeles Department of Parks and Recreation.

'Frigid Idjits' Set New Year's Outing

Water skiers at Convair SD will conduct their annual "frigid idjits" outing on New Year's Day, again braving the "sub-arctic" waters of Mission Bay, Tom Mathews, commissioner, reports.

The annual affair starts at 8 a.m. and a 50¢ fee will be charged to cover fuel costs. For additional information contact Commodore Gene Sevigny, ext. 1032, Plant 1, or BR-3-0828.

Mathews reports conversion of the club's outboard boat to an inboard type is progressing rapidly under the direction of Arleigh Riggs (Dept. 3). Water skiing activities have continued during the fall because of the warm weather.

Three Artists Win Xmas Card Contest

Artists from Convair SD, Astro and Palmdale shared honors last week, winning top awards in a Christmas card design contest sponsored by the Convair SD and Astro Art Clubs.

First place award went to E. B. Hernandez (Dept. 324, Palmdale). An entry submitted by Ruth H. Fair (wife of Jim Fair, Dept. 250-3, Astro) placed second and Tom Potts (Dept. 400, SD) won third place.

All designs entered in the contest were original and hand-painted.

Astro, SD Drivers Share Car Honors

Sports car drivers from Convair SD and Astronautics shared honors Dec. 12 at a CRA-sponsored Hare and Hounds event.

Ranked first were Bill Rector and George Kendall of Astro. In second, third and fourth were Convair SD drivers Bob Dunn, Tom Kienholz and Gim Hom.

Tom Jackson, SD Sports Car Club spokesman, said many entries failed to finish because of thick fog.

12-Year-Old Boy Rolls 501 Series

An Astronautics youngster, 12-year-old Steve Lyons, has been setting an unusual pace in the Astro junior bowling league which meets on Saturdays.

Young Lyons recently posted a 501 series. He also holds the high boys' game average (197) and is a member of the Titans, one of the top teams in the loop.

Hoedowners Install New Officer Slate

Square dancers from Convair SD were hosted at a special installation-of-officers dinner and party Dec. 6 at the Gillespie Field CRA Clubhouse.

Taking office at the dinner meeting were Chuck Svendsen, president; George Greenleaf, vice-president; Corky Cowley, secretary; and Dorothy Daughn and Lloyd Burris, publicity.

Maury Scholz, Hoedowner commissioner, announced that a special "Old Timers" dance is planned for the Jan. 23 party night at the University Heights Community Center, 4044 Idaho St.

Past Hoedowner members who are no longer active will be admitted upon presentation of either old membership cards or badges. Scholz said many of the older steps and patterns will be called at the dance.

Membership Drive On for Golf Club At Both SD, Astro

Annual membership drive of the Convair Golf Club is now in full swing at both San Diego and Astronautics.

Mort Smith, club secretary, urged all past members to renew their memberships as soon as possible and at the same time issued an invitation to new members.

Ten tourneys and a championship event have been slated for the 1960 season at various courses in the San Diego area. A \$3.50 membership fee covers costs of trophies and other tourney prizes in addition to door prizes at each of the quarterly meetings.

Players are asked to contact one of the following team captains in their area for '60 membership cards and additional information:

SD Plant 1, Jake Moore (Dept. 8), ext. 639, Bldg. 33; SD Plant 2, R. A. Lea (Dept. 603), ext. 409, Bldg. 2; Astro, Don Reid (Dept. 182), ext. 2695, Bldg. 1.

Astronotes to Rest Following Xmas

The Astronotes, CRA mixed chorus, plan two weeks of rest following a full schedule of personal appearances during the Christmas season, Commissioner C. P. Rolla reports.

No meetings are planned for Dec. 28 or Jan. 4. Next meeting and rehearsal will be Jan. 11 at 7:30 p.m. in the Astro cafeteria.

More voices, especially male voices, are needed.

First Social Event Held at Fairchild

FAIRCHILD AFB—Astronautics employees assigned here held their first social event Dec. 11 when they gathered for a Christmas party at the Plantation, Dishman, Wash.

Steak and lobster dinners were served, and dancing followed to music provided by Neva Nixon and George Finney.

Two New CRA Trap Shoot Teams Chosen at Qualification Event

Over 25 Antelope Valley Convair shooters entered the 50-target trap shoot contest of the CRA Gun Club Sunday (Dec. 6) to compete for new team positions.

Joe Jackson Named New CRA Commissioner

Joe Jackson (Dept. 321-2) is new commissioner of special activities of Convair Recreation Association in Antelope Valley, announced J. T. Schultz, employee services supervisor.

The new post has been created by expansion of women's activities, and will include responsibility for all special CRA events, explained Schultz. Former commissioner of women's activities was Bette Van Poyen, who recently resigned.

Jackson has been at Convair Palmdale facility for the last three years in electronics. Well-known throughout the valley as a talented musician and comedian, he has been active in organizing and directing local entertainments including the vaudeville for the Gay Nineties program. He also will be seen as emcee at the all-Convair New Year's Eve celebration.

Jackson, with his wife, Shirley, and two children, Susan, 9, and Jeff, 7, makes his home in Lancaster.

CRA Council Feted At Annual Banquet

Annual banquet given by Convair SD in honor of the CRA Council was held this month at the Grant Hotel.

B. F. Coggan, Convair vice president and Convair SD manager, was chief speaker. Master of ceremonies was D. C. Wilkens Jr., manager of industrial relations.

A highlight was presentation of the traditional gift to last year's CRA president. Danny Whorton, Council president, presented a movie projector to Tony Berardini, past president and veteran commissioner.

Club Members Dance At Patrick AFB Club

CAPE CANAVERAL — The first Christmas dance for Astronautics Management Club members here was staged Dec. 18 at the Patrick Air Force Base Officers' Club.

Santa Claus arrived early in the evening with gifts for the ladies. A buffet dinner was served at midnight. Serving on the reception committee were Mr. and Mrs. Jack Nichols, Mr. and Mrs. Len Kaminski and Mr. and Mrs. Jack Moline.

Donn Walsh, Gun Club commissioner, explained that Sunday's qualification meet was necessary to re-establish high point men in a team regrouping since several of the members have transferred from the Antelope Valley facilities.

Walsh tied with Bill Reid (Dept. 303), Edwards AFB, for first team standing with 46 out of 50 targets. Other spots on the No. 1 team were garnered by Don Thompson of Hughes, C. H. Barnes (Dept. 321-2), and S. G. Cingle of Hughes.

Second team members are Bill Staton and G. R. Lindamood (Dept. 321-2), tied for top spot, Waller of Edwards AFB, Jack Welch (Dept. 321-2) and Frank Anderson.

Alternates are Chuck Willey (Dept. 323-0) and R. Gore (Dept. 303), Edwards AFB.

Ratings were determined by 25 targets at 16 yards and 25 targets from handicap.

Antelope Valley Convair teams will compete with eight other trap shoot clubs registered in a round robin at future shooting events.

Commissioner Walsh reminds members that ammunition is available at the CRA rifle range at \$2.35 a box for shells and \$2 for reloads.

Larry Johnson Heads Trap Shoot Section

Larry Johnson (Dept. 321-2) was elected president of the trap shoot section of Antelope Valley CRA Gun Club at the Dec. 6 meet.

Johnson replaces L. H. "Red" Main (Dept. 303), Edwards AFB, who has served as president for over a year.

The election was held during the trap shoot team's qualification event at the CRA rifle range.

Palmdale Men Get ES Award

Two Palmdale men received payment early this month for their Employee Suggestion which will save Convair SD \$855 a year.

L. E. Dechert and O. E. Hutchings, both of Dept. 325, suggested a fabricated disc cutter for cutting out coupling discs. The laminated disc, used between compressor and motor, acts as a drive and shock resistor.

Each of the men received \$42.70 each as half-share of the joint award. Hutchings is a refrigeration and air conditioning mechanic, and Dechert, a machinist, in Palmdale maintenance.

Dechert was unable to be present for the check presentation as he is recuperating from an injury received in October when he broke his leg in a fall from the roof of his home.



DOUBLE PAYOFF—F. J. Parker, Palmdale chief of operations and services (at left), presents certificate of award and \$42.70 check to O. E. Hutchings (Dept. 325) for his share of joint Employee Suggestion. N. J. Waddington, Dept. 325 assistant foreman, accepts payment for L. E. Dechert (Dept. 325-1).

CRA Sports & Recreation Convairity

At Least Two Golf Tournaments A Month Scheduled For 1960

At least two week ends per month, and occasionally more, have been set aside for golfers interested in taking part in a special Convair golf program.

Astronautics CRA will hold or help sponsor at least one tournament per month. In addition, the Convair Golf Club, open to both Astro and Convair San Diego employees, stages a monthly tournament. This year the combined tournaments are being played through San Diego County.

Jim Batson, Astro CRA golf commissioner, said this week that heavy use of local courses forces bookings for CRA and CGC events months in advance.

Six Astro Players Hitting Over .300 To Pace Victories

Astronautics baseballers faced their most crucial test over the past weekend (Dec. 20) when they met the National City Athletic Club.

Astro and the National City team were deadlocked with two victories each in the second half of play. Astro copped the crown during the first half.

Blessed with six regulars now hitting over .300, the Astro team also features an air-tight defense and a steady pitching staff.

Catcher Bob Evert is currently batting .600. Manager Bud Mecham, an infielder and pitcher, is hitting .435; Pitcher Jerry Woods has a .416 average; and outfielder Jule Robinson is hitting .400. John Winters, an infielder, is batting .352 and outfielder Lee Buchanan is hitting .333.

The team is rounded out by Bud Banes, Harry Black, Norm Chaudoin, Ken Daniel, Bob Dirk, Jim Hammond, Carl Labmeier, Bill Roe and Rudy Vonzone.

Scores Soar Due to Winds

Golf at Torrey Pines Dec. 5-6 was like tossing a ping pong ball around in a wind tunnel. Gale-like winds swept the course both days.

As a result, scores soared. For instance, the 0-13 handicap division, normally won by a near-par gross score, went to a pair of golfers posting 80s. They were Art King and Jack Weaver. Bill Wray had a net 73 and Jack Ross a net 75 for honors in that category.

Joe Mullens posted an 83 in the 14-21 handicap bracket, with Gene McClure finishing second with an 87. Guy Farr had an 88-19-69 and Lyle Jenkins a 90-16-74 for net honors.

However, Hal Meyers of the 25 and up bracket turned in the surprise of the day with a gross 98. Jack King was second low gross with a 99. Gene Hartsock's 99-22-77 and Tom McCubbin's 100-23-77 paced the low net field.

Entries For Bowling Will Close Jan. 15

Entries remain open until Jan. 15 for the second annual Astronautics CRA plant bowling tournament slated for Jan. 23-24 and Jan. 30-31.

Application forms are available through employee services, Astro's bowling commissioners, Jack Boyle and Willard Braswell, and a special bowling committee which helps stage all Astro CRA keg affairs.

All money taken in during the tournament will be returned in prizes with an estimated one prize for every 10 keglers.

Golfers must take part in at least three medal play sweepstakes held by the two groups to be eligible for prizes. Those entering championship events must have an established handicap with one or both of the sponsoring groups. Three competitive scores within a three-month period are sufficient for handicaps. Too, for entries in championship events handicaps must have been adjusted within 60 days before the start of the tournament.

During the coming year starting times for Rancho Santa Fe will be between 7 and 9 a.m., all other courses from 8 until 10:30 a.m.

Starting times for CRA events may be reserved with employee services by noon each Wednesday, three days before the tournament. Exceptions are Torrey Pines times which must be reserved by noon (Friday) one week before the tournament and championships which close at 4 p.m. eight days prior to the first round of play.

Small cards containing this information, plus tournament dates, will be passed out at the January CRA and CGC golf events, Batson said.

Here's Astro's Golf Schedule

Following is a 12-month schedule of golf events open to Astronautics golfers:

ASTRO CRA

Jan. 16-17 at Coronado.

Feb. 6-7 at El Camino (Oceanside).

March 12-13 at Torrey Pines.

April 9-10 at Bonita.

(May reserved for Industrial Recreational Council tournament.)

July 9-10 at Coronado.

Aug. 6-7 at Torrey Pines.

Sept. 11, 18, 24, 25, CRA championship (match play) at Flying Hills.

Oct. 29-30 at Bonita.

Nov. 26-27 at Circle R.

Dec. 10-11 at Rancho Santa Fe.

CGC

Jan. 23, 24, 30 at Rancho Santa Fe.

Feb. 20-21 at Bonita.

March 26-27 at Circle R.

April 23, 24, 30 at Rancho Santa Fe.

(May reserved for IRC tournament.)

June 12, 19, 25, 26, CGC championship at Torrey Pines, Flying Hills and Rancho Santa Fe.

July 23-24 at El Camino (Oceanside).

Aug. 20-21 at Coronado.

Oct. 22-23 at Flying Hills.

Nov. 19, 20, 26 at Rancho Santa Fe.

Dec. 17-18 at El Camino.

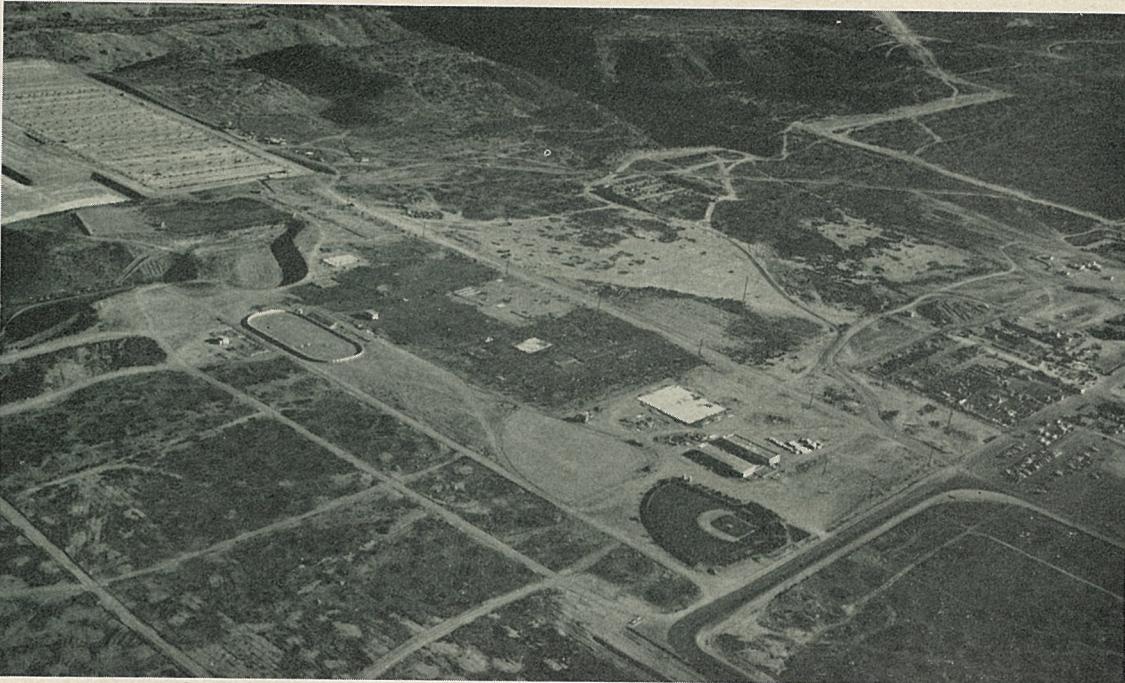
Linksman to Invade Coronado GC Course

Astro golfers will invade the Coronado course for the first time Jan. 16-17 for a CRA Sweepstakes.

Reservations for starting times may be made with Elaine, ext. 1111, from noon Jan. 4 through noon Jan. 13. Golfers unable to meet the assigned starting times are requested to notify Commissioner Jim Batson at AC-2-0531, ext. 132, no later than 4 p.m. Friday, Jan. 15.

Holiday Keg Tourney Planned in Florida

CAPE CANAVERAL — A special holiday handicap bowling tournament among Astronautics employees here is set for Dec. 27 at Orlando. The tournament will be divided between men's and women's events with prizes going to top teams and individuals.



ABOUT READY—Latest aerial of CRA recreation area at Astro shows many projects completed during year. Largest concrete slab is for tennis courts. Note bleachers by horse ring. Many other facilities will be ready for use by summer, 1960, through efforts of voluntary labor.

Astro Netters Edge Pomona In Last Match

Astronautics netters evened an old score Dec. 5 when they edged CRA tennis players from Pomona 8-7 in the second and final round of a home-and-home series. The latest matches were played in Pomona.

Pomona managed to win seven of 10 singles matches, but faltered in doubles play, dropping five. One doubles game was halted at three games each due to darkness.

Astro singles victors were: Gary Russell in an 8-6, 4-6, 6-0 defeat of Chuck Anderson; Gene Borlin, a 6-1, 6-3 winner over Doug George; and Jack Bowers who bested Fred Taunton, 6-0, 6-4. Astro's John Cannau, Larry Chambers, Jack Angleman and Dean Darrow were losers.

Ingrid Papich and Jackie Chamberlain of Astro lost in women's singles events to Florence Powers and Esther Lafave of Pomona.

Russell and Chambers won a 5-7, 13-11, 9-7 match against Chuck Anderson and Bill Anderson; Bowers and Cannau bested George Lyman and Ed Powers, 6-0, 6-2; Borlin and Angleman topped Leon Carver and Charles Horne, 11-9, 6-1; and Bowers and Cannau edged Mike Montcalm and Don Swanson, 6-3, 4-6, 6-2.

One mixed doubles event also went to Astro. Borlin and Papich topped Powers and Powers, 6-3, 8-6, 9-7. Russell and Chamberlain of Astro tied with Lafave and Lafave in a match called at dusk.

CRA Astro-Blades Plan Xmas Party

The Astro-Blades, CRA-sponsored ice skating group, will stage their first Christmas party tonight (Dec. 22) at a special skate session between 6:30 and 8 p.m. at Iceland.

Commissioner Bud Davies reports games, a grand march and door prizes will highlight the night's festivities. Instruction sessions will be halted for this night only.

A group began ice dancing recently and interest indicates this activity will become popular.

Next regular skate session will be Dec. 29 at the same location.

Rockhounds Planning Four-Day Expedition

Astro Rockhounds will take advantage of one of the holiday weekends for a field trip Dec. 31 through Jan. 3.

The rock collectors will hunt specimens at Palm Canyon and Crystal Hill, Ariz., and Wiley Wells, Calif.

Astro employees interested in taking part are invited to contact Commissioner John Stussy at ext. 3202 for details.

Recreation Area Work Halted For Holidays

Development work in the Astronautics recreation area, now halted for a three-week holiday period, will be renewed early in January and stepped up in tempo in anticipation of using many facilities in 1960.

The area, a 27-acre tract east of the Astro plant, has been one of changing scenes during 1959. Many projects were pushed to completion and some went into use.

Volunteers who spend their weekends working there have logged a total of 22,154 hours of work. Some 359 employees have won CRA Effies for 20 hours of work. A small number are now eligible for the 60-hour award, while a few have logged better than 100 hours each.

CRA is attempting to push the project to completion so that families and various CRA activities may enjoy the facilities. Progress is dependent upon volunteer labor.

Several facilities are now in

City League Action Will Start in '60

A pair of close games dropped Astronautics' CRA City League cage team out of action in the annual pre-season San Diego basketball tournament.

Astro's five took three straight, then lost to the Panchos and Untouchables to eliminate them from the double elimination affair.

Regular City League action begins shortly after the first of the year.

Making up the Astro squad are Percy Gilbert, Willie Pitts, Jesse Coffee, Hank Fuller, Bill Sheng and Roger Dishong. First year men include Tom Dobyns, John Wilson, Dick Hernandez, Virgil Roznus and Jim Everidge. Archie Rambeau of Dept. 600 is the coach.

Astro Drivers Win In 'Mountain Rally'

George Kendall and Dave Stevens, representing the Astro Sports Car Club, copped first place Dec. 6 in the "Rally Around the Mountain."

This event includes 200 miles of driving in six hours over some of the toughest roads in this area.

Astro drivers plan to take part in a party Jan. 15 at the Mission Valley Inn.

Plans are already being formed for the "Atlas Rally" to be staged by the Astro group April 10, Commissioner Bill Rector reports.

ASTRO-MODELERS TO MEET JAN. 6

A Jan. 6 meeting at 7:30 p.m. has been called for the Astro Modelers in the Astro cafeteria.

On the agenda will be events for the coming year.

operation there. A Little League ball park is completed and a softball diamond was used by CRA teams last spring. An archery range is in use and a horse ring available for riding and horse shows. Six horseshoe courts are completed as well as 17 family type barbecue units.

Beginning with the Jan. 9-10 weekend, work will get under way on many other partially completed facilities. Sycamore Canyon employees will plant grass on the softball diamond, add bleachers and a scoreboard and do general landscaping. Lighting will be added in time for an April start of CRA softball activities.

A unique race track for quarter and half-midget cars as well as Formula K carts will be pushed. Bleachers will be added with landscaping, a picnic area and a children's playground with hopes of use early in 1960.

Other projects slated for early completion are tennis and croquet courts, two group picnic areas with cooking facilities and various smaller projects.

CRA will make every effort to have a 12,000-square-foot clubhouse finished by the end of the year for use by many CRA activities and groups.

Landscaping in the area, mostly installed during 1959, includes some 500 trees, other plants, and grass. All are thriving nicely and promise to add to the beauty of the area.

While individuals are always needed for various jobs, much has been accomplished through the assignment of specific tasks to departments or small groups. Many of these projects are continuing, others will begin as soon as possible.

Astro CRA earmarks set sums from its monthly vending machine income for the area. A long range development plan has been set up to provide money as needed for the projects at hand.

In time, the area will feature the most complete family recreation facilities found anywhere.

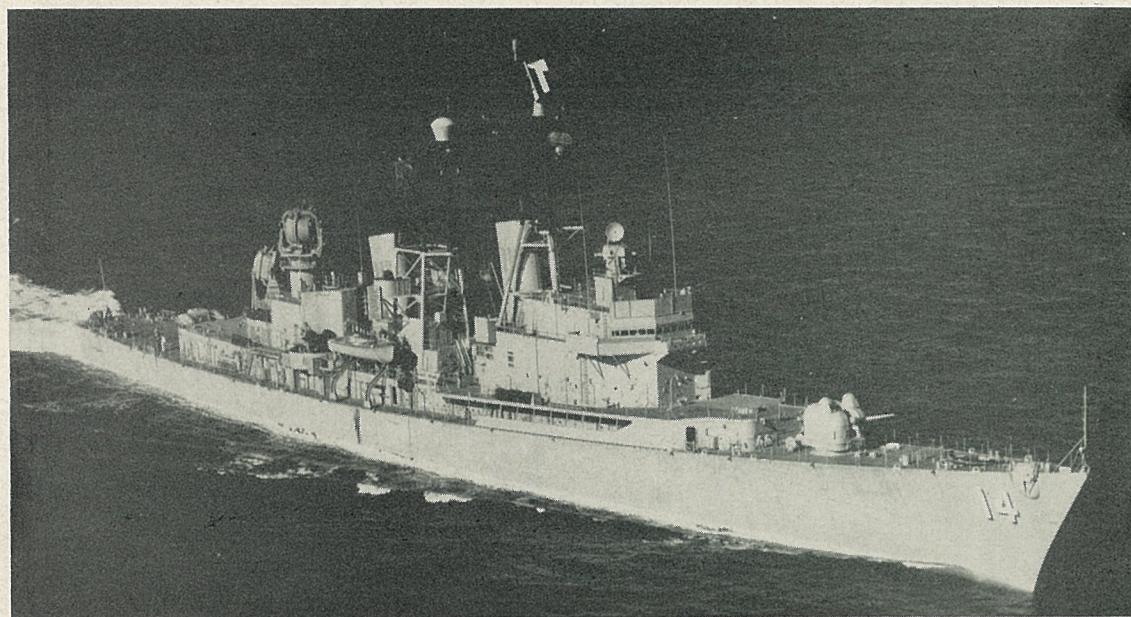
Skiers Brave Chilly Winds

Chilling winds added "atmosphere" recently when Astro snow skiers staged a "dry land" instruction session prior to a holiday ski trip to the north next week.

Larry Atwell headed the instruction committee in Balboa Park. Atwell said beginners were particularly interested in the art of rising after a fall.

Over the New Year weekend skiers will visit Mammoth and Squaw Valley ski areas.

Initial meeting of the 1960 season comes at 7:30 p.m. Jan. 6 in the Astro executive dining room. Arrangements will be completed at that time for a second trip to the Mammoth area Jan. 23-24.



FIRST FRIGATE—U. S. Navy's first guided missile frigate, USS Dewey (DLG 14), is shown here during sea trials prior to her commissioning Dec. 7 at Boston Naval Shipyard. Note Terrier missile launcher aft.

New Destroyer Leader, Terrier-Armed 'Dewey', On Active Fleet Duty

Heralding a new era in sea power, USS Dewey (DLG-14), first of a new class of guided-missile destroyer-leaders, officially joined the Fleet at 3 p.m. Monday, Dec. 7, in commissioning exercises at the Boston Naval Shipyard.

The 512-foot, 5,600-ton prototype of the largest destroyer class ever built, is 50 feet longer and almost double the tonnage of the largest World War II destroyer.

Much of her armament and equipment was undreamed of in that conflict. This includes the latest in anti-submarine weapons—the guided missile ASROC (anti-submarine rockets), and Terrier, built at Convair Pomona and designed to repel air attack. More conventional armament includes 50-inch 45 and 3-inch 50 caliber guns and tubes for anti-submarine torpedoes.

Implementing this armament are the latest in search radar and long range sonar devices. Once detected, these can keep an enemy target under surveillance, record its height or depth, course and speed. The Dewey will be manned by a complement of approximately 20 officers and 300 enlisted men, including many electronics specialists. The new warship is the second to carry the name of Admiral George Dewey, whose mildly phrased order, "You may fire when ready, Gridley," brought destruction within a span of a few hours to the Spanish fleet in Manila Bay.

She was built at Bath, Maine, by the Bath Iron Works, which also launched the first USS Dewey in 1934.

A comparison of the two illustrates the rapid evolution of warships in the past quarter century.

The new destroyer leader's 5,600 tons are more than three times the 1,726 tons designed displacement of her predecessor and her 512 feet dwarf the other's 341.

The new class even approaches dimensions of cruisers authorized in the World War I era. USS Raleigh, a light cruiser authorized in 1916 and built by Bethlehem Steel Company's Quincy, Mass., yard, was 555 feet long and of 7,050 tons displacement, only 14 feet and 1,450 tons greater than USS Dewey (DLG-14).

Dewey was launched last November, 1958, with New York Congresswoman Katherine St. George as sponsor. Since then the ship has engaged in several sea and machinery trials.

She left the builder's yard early Wednesday morning, Dec. 2, for Boston and arrived that afternoon.

Aboard was her prospective commanding officer, Cdr. Elmo Russell Zumwalt, son of Dr. and Mrs. E. R. Zumwalt of Tulare, Calif., who took command at the commissioning exercise.

He has served in seven ships since graduation from the Naval Academy in 1943, all but one of which were destroyers.



NAMESAKE—Admiral of the Navy George Dewey, only officer of U. S. Navy ever to hold that rank, is shown here. USS Dewey (DLG 14) is second ship to be named for hero of Battle of Manila Bay.

Closed Circuit TV Operates on Dewey

A unique feature aboard the USS Dewey is a closed circuit television installation. TV receivers, located in strategic spots in the ship, show a picture of plotting boards in the combat information center where the TV camera is located. For example, the commanding officer and officer of the deck, by simply glancing over their shoulders at a receiver embedded in the bulkhead on the bridge, can get a full picture of all attacking aircraft being plotted in CIC.

Another feature of the Dewey is the use of aluminum in her superstructure, adding to stability and seaworthiness.

Bureau Merger Beats Schedule

The U. S. Navy's Bureau of Ordnance and Bureau of Aeronautics were officially merged Dec. 1 into a new Bureau of Naval Weapons—a full month ahead of schedule.

The new Bureau was actually established on paper Sept. 1, but the additional time was required to complete organizational details. RAdm. Paul D. Stroop, USN, former chief of the Bureau of Ordnance, is the new chief of the Bureau of Naval Weapons.

At Pomona the title of Capt. Edward C. Sledge, USN, has been changed from "Naval Inspector of Ordnance, Pomona," to "Bureau of Naval Weapons Representative." The official abbreviation of the new title is BUWEPSREP.

The official name of the Convair-operated Naval Industrial Reserve Ordnance Plant at Pomona will remain unchanged.

The merger of the two Bureaus was the result of a recommendation of the Department of the Navy's Committee on Organization.

First 880 Spare Parts Orders Speedily Filled Via 'Transceiver' System

First spare parts orders received for the Convair 880 are being shipped to Delta Airlines this month after being processed by Convair SD's new "transceiver" system.

Service parts at Convair SD this month also acknowledged receipt of the first spare parts purchase orders from Trans World Airlines.

Delta, during December, will receive 350 spare parts items for the 880 jetliner. By the end of June, Delta will have received over 5,000 jet 880 spares items valued at roughly \$1,300,000, according to Harold Wolfe, SD general supervisor of service parts.

All of the Delta orders are being processed by the new "transceiver" punched card communication system in accordance with Spec 200 as recommended by the Air Transport Association (Convairity, Sept. 16, 1959).

In brief, the system works as follows. Order tab cards received at SD service parts (Midway and Fordham) are pre-punched with all of the information needed for processing. An IBM "transceiver" system reproduces duplicates of the order at Rose Canyon and Bldg. 8, Plant 1. After accounting and shipping functions have completed their tasks all pertinent information connected with processing the part is recorded at service parts by a facsimile posting machine.

The system eliminates many steps formerly required in processing spares orders and is considered one of the most advanced in the industry.

At present, there are some 13,000 "master" tab cards for a corresponding number of jetliner parts on open order. (Eventually, the "jetliner" term will describe parts for both the 880 and 600.) By the end of 1960, the number of jetliner parts on open order will be around 18,000.

The number of jetliner spares being processed by service parts and stocked at Rose Canyon increases daily. At the same time, however, the spare parts pro-

gram needed to support Convair SD's twin-engine planes is being revamped. It, too, will eventually be processed by the "transceiver" system.

At Rose Canyon, most of the Bldg. 2 warehouse is being used for receiving, stocking and shipping spare parts for the jetliner, twin-engine and military (F-102 and F-106) programs.

R. H. "Buck" Johnson, assistant general foreman of material receiving for the military and commercial spares programs, pointed out that eventually the entire building (100,000 sq. ft.) will be taken up to support the spares program.

New shelving in the warehouse is constantly being added, most of which will accommodate spares items for the 880 and 600. Johnson estimated that roughly 40,000 spares items will be stocked in the warehouse by the end of 1960 to support both jetliner and twin-engine planes.

The modern processing of spares orders does not end with the "transceiver" system. New packaging methods for shipping parts to airlines are also in use and being developed.

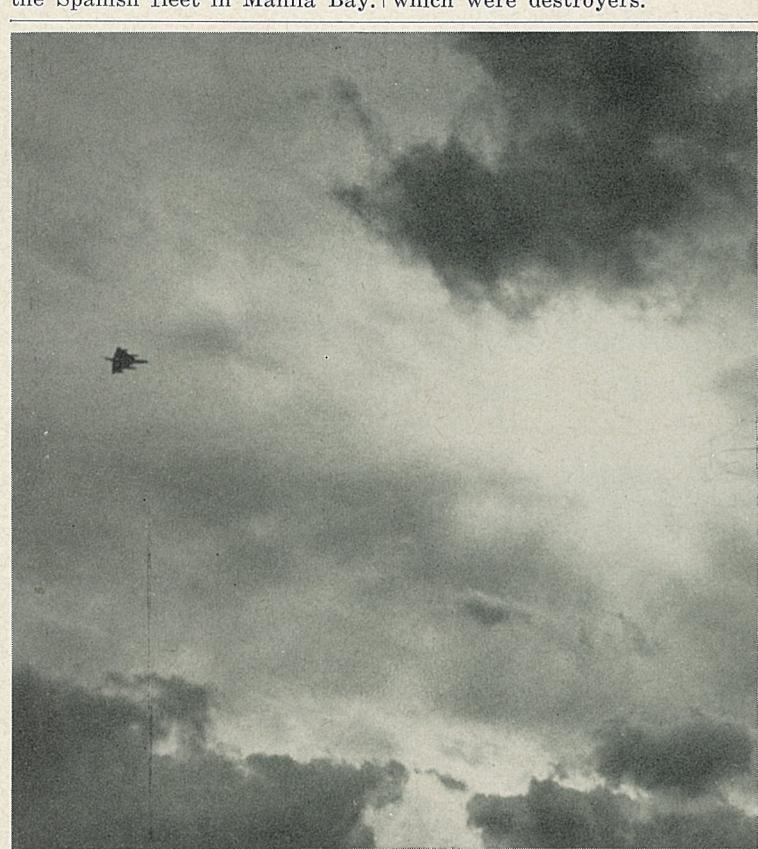
J. J. Janssen, Convair SD packaging specialist, said packages being designed fall roughly into two classes, each of which protects parts to the highest degree possible.

In the "long life" category, containers are designed for repairable parts such as generators, cylinders and control surfaces. Emphasis is placed on quick and easy removal of the part and reusability of the container which is expected to make "100 trips." These containers, for the most part, are made from light weight metals, fiber glass, vulcanized fiber, etc.

Materials used in the "short life" group are made of cardboard, fiberboard and wood. In this category, too, emphasis is placed on having many parts of the container reusable for another shipment.



FIRST ORDER—Delta Airlines this month received first shipment of 880 spares that eventually will total 5,000 items by June. In top photo, Lu Shafer (Dept. 14) discusses punched card "transceiver" system with J. F. Jaehn (center), SD spares store supervisor, and E. L. Elliott, Delta Airlines representative. Below, Harold Wolfe, general supervisor of service parts, shows Elliott ATA Spec 200 packing card which accompanies each item. Note specialized packing of individual parts.



BREAKTHROUGH—"Bright day" for Air Force is indicated as sun breaks through clouds while B-58 Hustler No. 31 heads for new home at Carswell Air Force Base after final acceptance flight. Picture was made on delivery day of first production airplane. Col. David M. Jones, test commander of B-58 Test Force, was at controls of first tactical Hustler during four-and-a-half hour "routine" flight.



Published every other Wednesday.



Convair Division of General Dynamics Corporation.

Convairity

Vol. 12, No. 25

Wednesday, December 9, 1959

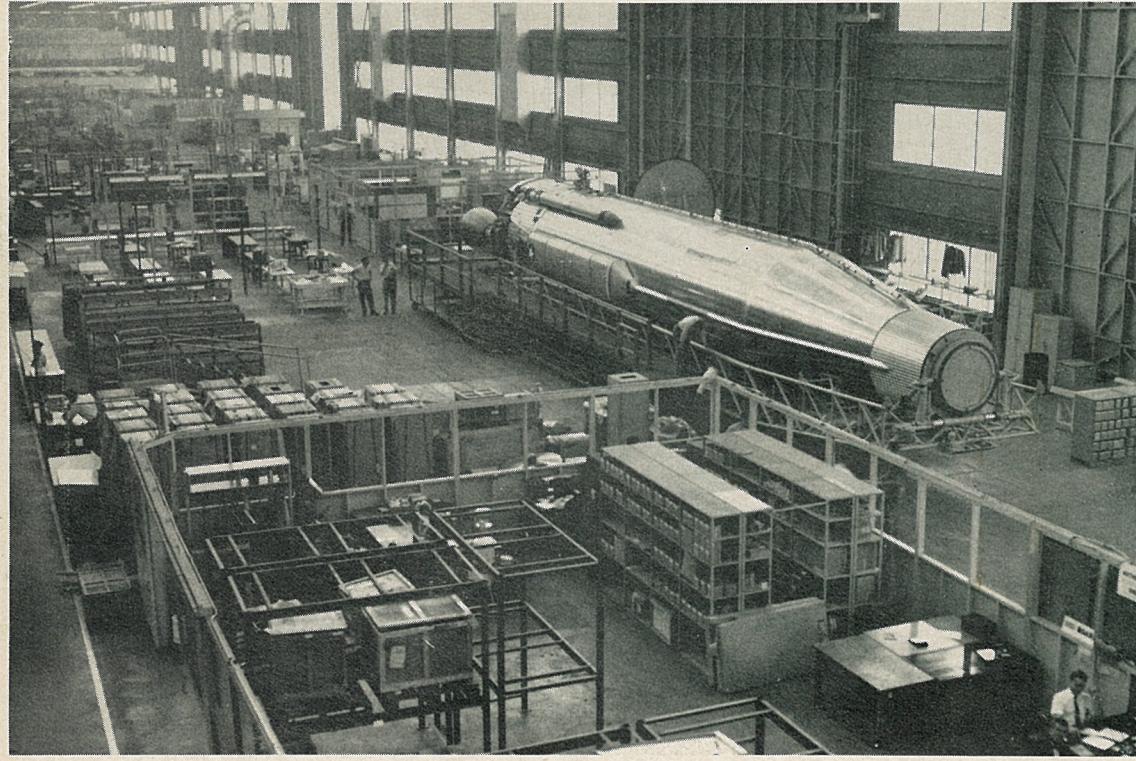
SAN DIEGO, POMONA, ANTELOPE VALLEY, VANDENBERG AFB, CALIF.

Astronautics

EDITION

Convair Astronautics central news office, Bldg. 8, San Diego plant, ext. 3322. For news contacts at other Astro facilities, see page 2 masthead.

AFMTC, CAPE CANAVERAL, FLA., FORT WORTH, TEX.



LATEST ADDITION—Through years Plant 2 has known many types of aircraft, but saw something new recently in this Atlas missile located in "A-B" bay. Missile will be converted to training configuration for transportation to Sheppard AFB, Texas, an Air Force crew training center.

Missiles Modified at Plant 2 For Use in Training AF Crews

Two Atlas missiles, both veterans of Astronautics static firings, will receive a new lease on "life" for still another important task—training of future ballistic missile crews.

Modification work on the first of the two "birds" is now in progress in Astro's support center, a product support department function, in Bldg. 3, SD Plant 2. Work is being performed by crews reporting to Supt. J. M. Rogers.

Shortly after the first of the year the first modified Atlas will be shipped to Sheppard AFB, Texas, where it will be used by Air Force trainees taking individual training in Atlas missile operations. The second missile will follow the same routine at a later date.

Astronautics is adding to and altering the missiles with such systems and components necessary to bring them up to full initial operational capabilities.

At the Wichita Falls, Texas, base they will be used with Convair-designed training units which will allow trainees to conduct check-out operations, conduct pre-launch procedures and even stage "mock" countdowns. The "birds" will lack only the ability for actual launch.

Sheppard AFB, already "home" to a growing group of Astronautics employees, will be one of two training bases operated by the Air Force. Men there will learn such skills as necessary to prepare them for crew training at Vandenberg AFB.

SD Activates New Dept. To Build Pods, Pylons

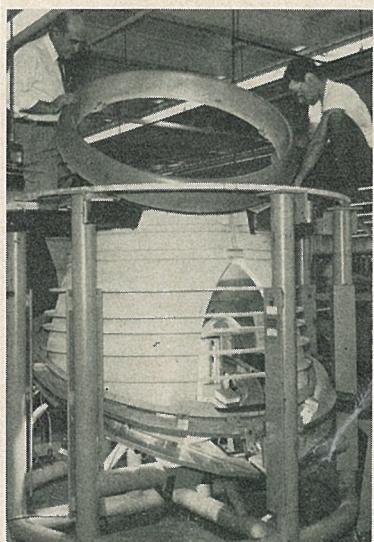
A new department has been activated at Convair San Diego with sole responsibility for building pods and pylons for the new Convair 600 jet transport.

The 600 pod, pylon, and engine buildup department (Dept. 140) will occupy 33,000 square feet on the east side of Bldg. 4 at Plant 1, between Cols. E-23 and E-38 where tooling fixtures are now going into place.

W. S. Nader and C. W. Clark, as Dept. 140 foremen, will supervise the work, reporting to F. E. Grossher, jet transport wing superintendent. First assistant foreman assigned to the new department was E. H. Ulsund with further appointments to follow.

At present, approximately 25 men have been drawn from production departments in Plants 1 and 2 to form the nucleus of the new department. A peak employment of 200 trained personnel is anticipated by the first of the year when pod and pylon production hits its stride, said Nader.

Tooling at SD (Dept. 401) is well along in construction of tools for pod components—doors, nose cowl, fan duct, fixed nacelle, pylon parts, and subassemblies. Sixty-two fixtures will be needed for major assemblies for two ships' sets—eight pods and pylons—to be turned out in one month at the start of production buildup. All fixtures and tools were designed by SD tool design.



FIRST 600 POD—W. S. Nader, Dept. 140 foreman at Convair San Diego, and B. D. Marries fit leading edge on nose cowl of first Convair 600 pod to be produced at SD Plant 1.

Veteran Convair Men Assigned to Astro Base Dept.

Appointment of W. P. Woods as activation works manager and selection of a veteran staff of Convair executives to report to him in Astronautics' new base activation department has been announced by A. P. Higgins, base activation manager.

In his new post Woods will be responsible for planning, liaison, operations, logistics, projects and service phases of the base activation program for Astro.

Reporting to Woods will be: C. C. Pope, chief of activation projects; S. E. Chavez, chief of activation planning; W. T. Lacy, chief of logistics and service; and E. J. Huntsman, chief of activation operations.

Woods, Pope and Lacy are transfers from Convair SD, while Huntsman and Chavez move to new assignments within Astronautics. The five men represent more than 83 years of Convair service among them.

Woods has been chief tool engineer at San Diego's Plant 2 since late 1952. During this period the F-102 and F-106 interceptor programs were at their peaks. He moved to San Diego from Convair Fort Worth after working more than seven years there in various supervisory capacities. He headed Fort Worth's largest tooling section, later (Continued on Page 2)

Material Service Division Foreseen In Move to Merge

NEW YORK — Directors of General Dynamics Corporation and Material Service Corporation of Chicago last month announced the signing of an agreement calling for the merger of Material Service Corporation into Dynamics as the Material Service Division, subject to approval by share owners. Meetings of share owners of both corporations have been scheduled for Dec. 29.

The basis of the Agreement of Merger, reflecting revisions of the terms contemplated by both corporations at various times during the period of negotiation, is set forth in a letter to Dynamics share owners from Frank Pace Jr., chairman of the board of directors of General Dynamics. The letter prefaces a proxy statement mailed to Dynamics share owners.

Christmas Projects Shaping Up Rapidly Among Folk at Astro

Plans for spreading Christmas cheer to needy San Diego families are shaping up rapidly at Convair Astronautics.

In a concentrated effort, coordinated by employee services, at least four separate programs are under way. They will involve as many of Astro's San Diego work force as care to participate.

One program will need volunteers next week. It is the annual Christmas party for needy children set for Dec. 19 in the Astro cafeteria. Employees' Con-Trib-Club has set aside \$2,500 to help buy toys and clothing for the children as well as food parcels for each family. Salvation Army will supply names and help conduct the party, along with CRA assistance.

Gifts for each child will be brought to the Astro cafeteria Dec. 14. Each must be individually wrapped. Those wishing to assist are asked to be on hand at 7:30 p.m. In addition, about 30 adults will be needed Dec. 19 to help conduct the party. Volunteers are asked to contact employee services, ext. 3363, and register their services.

Many Astro departments and groups are preparing to "adopt" needy families. Special committees are being formed. Dodge Dean, chairman of Con-Trib-Club's emergency aid fund, will supply the names of needy Astro families to groups upon request (ext. 2657).

Special collection boxes for new and slightly used toys will be set out Dec. 7 through 11 in the plant, daily between the hours of 6:30 and 8:15 a.m. and 3:45 and 5:30 p.m. Toys collected will be turned over to the Marine Corps Reserves' "Toys for Tots" program for distribution.

And one of Astro's most popular collection points—the Bldg. 2 reflection pool—is again ready to receive coins.

Last year over \$1,000 was collected in this manner. To date this year, \$213.57 has been gathered. This sum will be added to money collected between now and Christmas. Money will be used to

Bruey Reports As AF Aide

Convair Astronautics has welcomed a new special assistant Air Force plant representative. He is Lt. Col. T. J. Bruey.

Lieutenant Colonel Bruey reported to Astro late last month from Headquarters, USAF at Washington, D. C., where he was chief of the overseas branch of the colonels' group.

A native of Lisbon, Ohio, and a former student at Oberlin College, Lieutenant Colonel Bruey is a graduate of the Royal Canadian AF Staff College which he attended as an exchange student.

A command pilot, Lieutenant Colonel Bruey flew bombers during World War II in the Pacific. He has seen extensive duty with Air Rescue Service units, including assignments at Newfoundland and Greenland.

San Diego is a "second home" to the Bruey family. His wife, Ethel, is a native San Diegan.

provide Christmas for needy, with Astro families receiving first priority.

Questions concerning any of these programs may be directed to employee services, ext. 2657.

Con-Trib-Club Membership Swings Upward

While returns are far from complete, membership in the Astronautics Employees' Con-Trib-Club seemed destined last week to swing sharply upward as a result of current solicitation of nonmembers.

Astro started the drive in late November to contact the 4,000-plus employees on the total payroll of over 17,000 who were not Con-Trib members. It marked the first attempt to round up both on and off-site nonmembers ever attempted at Astro.

Late last week 1,000 of the 3,000 tab cards passed out in the San Diego area had been returned. Tabulation shows an overwhelming margin in favor of joining. Similar trends in later returns will likely raise Astro's membership to beyond 90 per cent.

Drive workers will continue to function until the 2,000 on-site and 1,000 off-site cards are all accounted for.

Astro hopes to climb out of a cellar position among similar organizations at other Convair operating plants.

Local charities in Florida, Wyoming and California as well as one international organization will benefit from disbursement of Astronautics Employees' Con-Trib-Club funds.

The Laramie County (Wyoming) United Fund drive will receive \$3,500 from Astro employees assigned to Warren AFB for this year's drive.

Fish Memorial Hospital of Florida gets \$500 contributed by Astro employees at Air Force Missile Test Center nearby.

The United Community Services Fund of Northern Santa Barbara County (California) receives \$5,000 from Astro employees at Vandenberg AFB.

These disbursements were recommended by Con-Trib-Club advisory committees at each location and approved by the Employees' Con-Trib-Club Committee in San Diego.

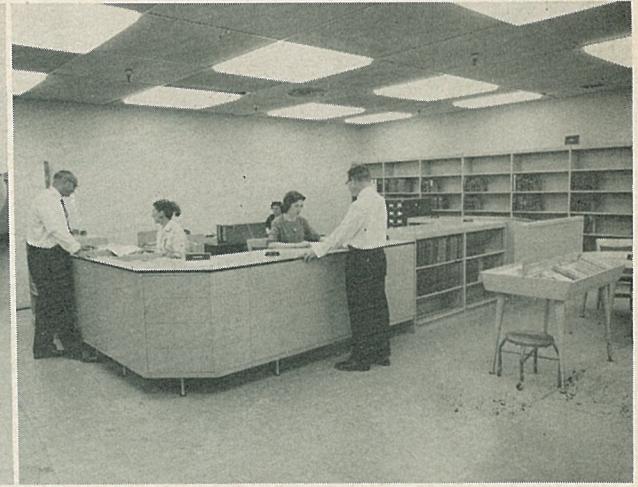
In another disbursement, the committee gave final approval to contributing \$1,500 to the International Guiding Eyes, Inc.

College Counsellors Due at Astro Dec. 21

As a service to Astronautics employees interested in educational opportunities educational services office has arranged for three college counsellors to be on hand at Astro Dec. 21.

From 9 a.m. half-hour sessions will be arranged for employees interested in graduate work in business administration; or undergraduate work in the same subject; industrial management certificate program; and graduate work leading to an M.A. degree in mechanical engineering.

Times may be reserved by calling ext. 1473.



NEW LOOK—Left and right shots of newly-remodeled Convair San Diego engineering library in Bldg. 5 show contrast with center view of former circulation area.

At right, Keith Blair, chief librarian, and Frank Armstrong consult with Annabel Whitby and Heloise Grant at new circulation counter. In background is Lydia Curry.

Veteran Convair Men Assigned Roles in Astro Base Activation

(Continued from Page 1) served as superintendent of final assembly and was superintendent of development manufacturing prior to his transfer.

Pope was tool project engineer at Plant 2. His Convair service dates back to 1942 when he joined Convair Fort Worth. He moved up through the ranks there and transferred to San Diego in 1953. He has served mainly in tooling and special projects sections.

Chavez joined Convair in 1942 at San Diego. Since that time he has worked extensively in engineering, primarily in testing operations. He has been with Astro from shortly after its inception, serving at Sycamore Canyon as test director, then in field test support and was chief of activation service in product support department prior to his new assignment.

Lacy has worked with Convair for 18 years, joining the company first at Fort Worth. Through the years he has held various supervisory positions at Fort Worth and later at San Diego where he

transferred in the early days of the F-102 program. His latest title was general supervisor of planning control at Plant 2.

Huntsman joined Convair SD in 1941 in final assembly. He moved into supervision in 1950 and up to general foreman of field operations during the height of the F-102 and F-106 programs at Plant 2. He transferred to Astro in 1958 as chief of operations support at Sycamore Canyon, a post he held until his recent move to base activation.

Pod and Pylon Dept. Formed

(Continued from Page 1) will power the Convair 600.

This RB-66, two-engine reconnaissance bomber built by Douglas Aircraft Co., Inc., for the Air Force, is leased to General Electric Co. for engine testing. It is the same plane used to check out the CJ-805-3 engines for the Convair 880.

Horkey-Moore Associates of Torrance, Calif., has been subcontracted by GE to build the pylons and fixed pod portions for the first test pods. Convair SD has the task of building the major portion of the pods.

Assembly of production 600 pods and pylons in the Convair SD plant will begin immediately after completion of the RB-66 test articles.

SD, ASTRO TO GET \$1 HOLIDAY DINNER

Christmas holiday dinner at all Convair Astronautics and San Diego cafeterias is set for two weeks from today, Wednesday (Dec. 23).

For just \$1, tax included, Convair diners will have their choice of a complete turkey or ham dinner, said W. E. Rickman, The Prophet Co. supervisor of Convair cafeterias.

Besides the entree, dinner will include dressing, gravy, cranberry sauce, tossed green salad, corn, snowflake potatoes, roll and butter, dessert, and drink. Apple, mince, or pumpkin pie may be selected and choice of hot or cold drink is offered.

Rickman said that serving operations will be streamlined to take care of the expected crowds. The special menu will be offered during all lunch periods at SD Plant 1 and Plant 2 cafeterias and at the Astronautics cafeteria.

Management Club's Last Meet of '59 Tonight

Astronautics Management Club stages its final meeting of the year tonight (Dec. 9) in a Caribbean Room, El Cortez Hotel, gathering.

Speaker will be Dr. William Rust, president of Cal Western University. Material department is sponsoring.

Astro Welcome At SD's Store

Astronautics people may take advantage of discount prices offered Convair shoppers at the Employees' Store located at Convair San Diego.

The store, across Pacific Highway from SD Plant 1, now has a wide selection of merchandise on hand for Christmas buying, said W. E. Rickman, manager. Stock ranges from electrical appliances, household articles, jewelry to toys for all age groups.

Holiday shopping hours from 9 a.m. to 9 p.m. Mondays through Fridays, and on Saturdays from 9 a.m. to 5 p.m., are now in effect. A lay-away plan is available with all purchases to be claimed by Dec. 22.

Robertson Is Astro Administration Asst.

George M. Robertson, formerly assistant chief engineer, has been shifted to the staff of J. R. Dempsey, Astronautics manager, as assistant for administration.

Dempsey has indicated Robertson will act for him in specific matters including: methods of compilation of estimates; establishment of division and departmental direct and indirect budgets; indirect and direct budget reporting and performance measurement; establishment of budget responsibilities and expenditure authorization patterns; and assignment of duties relating to value control, cost control, facility control and other business practices.

Part Time College Teachers Placed

Educational services at Convair Astronautics is helping place in local colleges Astro employees interested in teaching either evenings or part time.

Six local colleges from time to time list teaching opportunities for qualified personnel. Information on the program may be obtained from Ray Shortridge at ext. 1473.

Con-Trib Stickers, Cards, Pins Readied

Employees' Con-Trib-Club membership stickers, cards and pins are being readied at Astronautics this week for all employees who have recently joined Con-Trib-Club.

Astro Dept. 578-3 Couple Married

Wedding bells pealed out Nov. 25 for two Convair Astronautics employees from the same department.

Frances Wilson and John Andrews, both of Dept. 578-3, were wed at the Chapel of the Roses, Chula Vista. Frances is the daughter of F. M. "Hack" Wilson of Dept. 756-3.

Space Survival Responsibility Of New Astro Staff Physician

Expansion of Convair Astronautics' medical capabilities has been accomplished with the addition of three new members to the staff of James Ryan, M.D., Astro's chief physician.

Two of the additions, Walter Appleman, M.D., and Donald C. Boatwright, M.D., are staff physicians. The third, K. E. Lauterbach, is an industrial hygienist. All have extensive backgrounds in specialized fields. They join Dr. Ryan who has been with Astronautics since its inception and T. E. Patton, M.D., a staff physician for the past 18 months who now handles medical activities on the second shift.

Dr. Appleman will have responsibility for space medicine problems concerned with manned space vehicles and satellites. In this capacity he will be concerned with human survival in space; human tolerance to stress; space cabin ecology; and human capabilities of operating equipment in space environments.

A native of St. Louis, Mo., Dr. Appleman is a Navy veteran who received a B.A. degree in pre-med from Occidental College, Los Angeles. He holds an MD degree in biochemistry and nutrition from the University of Southern California Graduate School and a medical degree from the University of Zurich (Switzerland) Medical School. He also has an extensive background in the field of teaching in biochemistry and physics as well as research projects both in the United States and abroad.

Dr. Boatwright was employed by Douglas Aircraft, El Segundo, as a medical research consultant to the engineering department, prior to joining Astro.

Dr. Boatwright was born in Denver and received an A.B. degree in chemistry from the University of Denver. He earned a master of science degree from the University of Colorado's School of Medicine where he also earned his medical degree.

Dr. Boatwright began the general practice of medicine in Bay

Teen-Ager Christmas Dance in Cafeteria To Be 'Stag or Drag'

Astronautics teen-agers will enjoy their first big Christmas dance at the Astro cafeteria from 7:30 until 10:30 p.m. Dec. 19.

Sponsored by Astro CRA, the affair will be stag or drag and free to all boys and girls.

An orchestra will provide music and refreshments will be available. Adults will assist in all phases of the program. Parents are welcome.

Slated to become an annual affair, the Christmas dance will climax a year of successful activities for Astro youth.

Convair Daughter Beauty Contestant

Another Astronautics daughter has finished high in a national beauty contest.

She is Mrs. Gwen Clark, daughter of Astro's Harold Fleming of Dept. 771.

Her title: second in a national Miss Drive-In contest.

City, Mich., and worked for the San Diego Public Health Department prior to joining Astro.

Lauterbach is a veteran of 13 years in the industrial hygiene field in both research and practical application of theory. He is a native of Rochester, N. Y., who holds a B.S. degree in chemical engineering from the University of Rochester and an M.A. degree from the University of Buffalo.

His experience includes three years as a research engineer with the Gulf Research and Development Co.; 11 years as an instructor in industrial hygiene and junior scientist with the Atomic Energy Project, University of Rochester; and two years as a special services engineer for E. I. du Pont de Nemours and Co.

Commendation Goes to Major

Col. Harvey E. Moose, Air Force Plant Representative at Astronautics, has presented the Air Force Commendation Medal to Maj. James H. Thornton of his staff.

A citation accompanying the award indicated Major Thornton distinguished himself as acting chief of the Air Materiel Command Liaison Office at Warren AFB, Wyo., from November, 1958, to June, 1959.

The citation read, in part:

"During this period he demonstrated extraordinary managerial and leadership ability, as well as exhibiting unusual devotion to duty in the initial establishment of this office. The complete and comprehensive establishment was so thorough that other AMC liaison offices were patterned after the organizational concept created by this officer."

Major Thornton has been a member of the Astro AFPR since August as deputy assistant for field operations. He is a command pilot and holder of the Guided Missile Badge. He is a graduate of the University of Akron, Ohio, and Harvard Business School where he earned a master's degree in business administration.



WELL DONE—Col. H. E. Moose, AFPR at Astro, presents certificate accompanying Commendation Medal to Maj. James H. Thornton. Medal was for work in setting up liaison office at Warren AFB.

Convairiety

Founded Sept. 1, 1948. Published in six editions (Fort Worth-Daingerfield, San Diego, Astronautics, Pomona, Antelope Valley-Holloman and the Mail) by Convair Industrial Relations. General Offices, San Diego, Calif., Logan Jenkins, editor-in-chief.

Approximate current total circulation, over 65,000. News items and letters to the editor are solicited, but no advertising can be accepted.

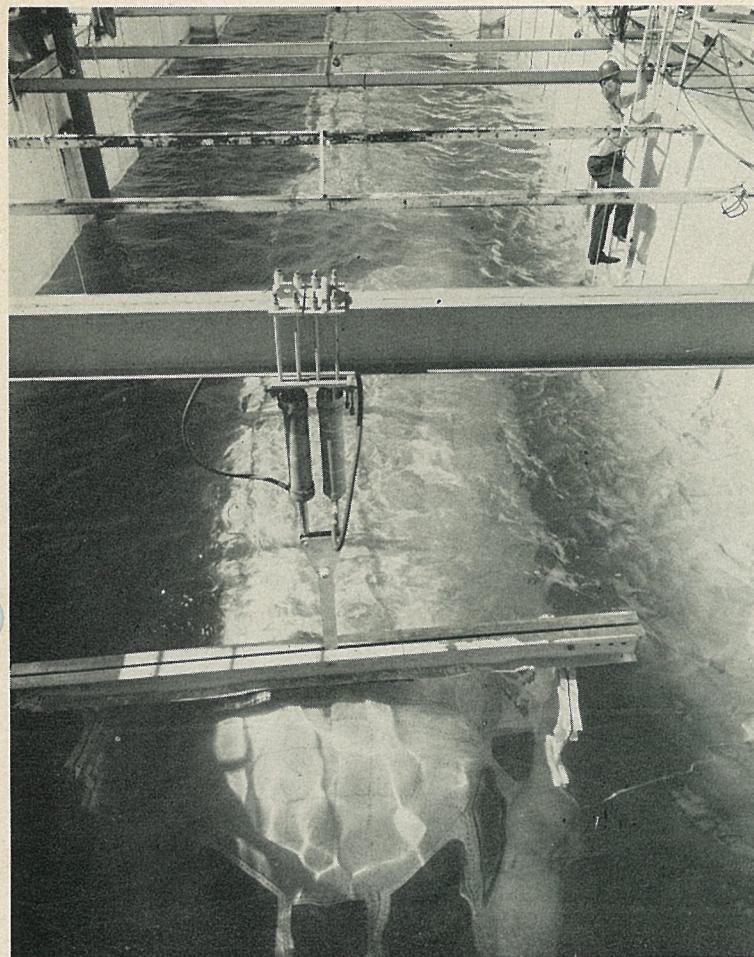
SD Editorial Offices, Building 32, Plant 1, ext. 1071. Staff: Grayce Fath, Helen Pemberton, Fred Bettinger.

Astronautics Editorial Offices, Bldg. 8, Astro site, ext. 3322. Staff: Bryan Weickersheimer, news editor; Alyce Martin, news contacts: AFMTC, Bobbie Waddell, ext. 3038; Vandenberg AFB, Bunny Ingram, ext. 8-3258; Warren AFB, Bill Jack, ext. 72254.

FW Editorial Offices, Col. 73C, ext. 2961. Mailing address: Convairiety, Convair, Fort Worth, Texas. Telephone PERSHING 8-7311. Staff: Dave Lewis, news editor; Susan Bagby, Mary Beck.

Pomona Editorial Offices, Room K-222, Bldg. 2, ext. 6226, mail zone 3-8. Staff: James Combs Jr., news editor; Dorothy Keller.

Antelope Valley Editorial Office, Room 103, Bldg. 301 B, Palmdale, ext. 337. Staff: Richard L. Millett.



MOBY DICK?—Resembling huge whale, Convair 880 fuselage lies submerged in hydrostatic test tank at SD seaplane ramp as it passes half-way mark in second part of testing program. Fail-safe and crack growth checks will end this month. On ladder is Russ Sherman, SD structures test lab engineer.

Minnesota Site Chosen For 600 Anti-Ice Test

A number of Convair SD men are shivering in Minnesota weather with the Convair 600 pod test specimen slated for anti-icing testing.

Built in SD experimental, the test stand assembly, complete with bellmouth, shroud, and ejector, will be set up this week at Hopkins, Minn., for extensive tests during the next two months.

The test stand was completed on schedule last month by Willard Martin's group in Dept. 31. Shipped by rail, with delicate instrumentation parts going air freight, components were due to arrive at the Hopkins test site early this week.

The Minnesota location was chosen because temperatures during December and January normally drop to 20 degrees F. below zero, said K. V. Lawson of the SD engineering project office. The outside air temperature will be important in simulation of actual cold weather flight conditions.

A General Electric CJ-805-21 prototype engine will be installed in the test stand to serve a dual purpose during tests. While sucking

ing air through the ejector to simulate flight velocities around the engine inlet, it will also act as a deicer. Air from the engine is diverted to keep ice from forming on the leading edges of the air intake ducts. Tests will check out exact amount of air diversion necessary for deicing without affecting engine power. The 30-foot-long tail pipe (or ejector) can be used in varying lengths to attain proper airflow conditions simulating various airborne speeds.

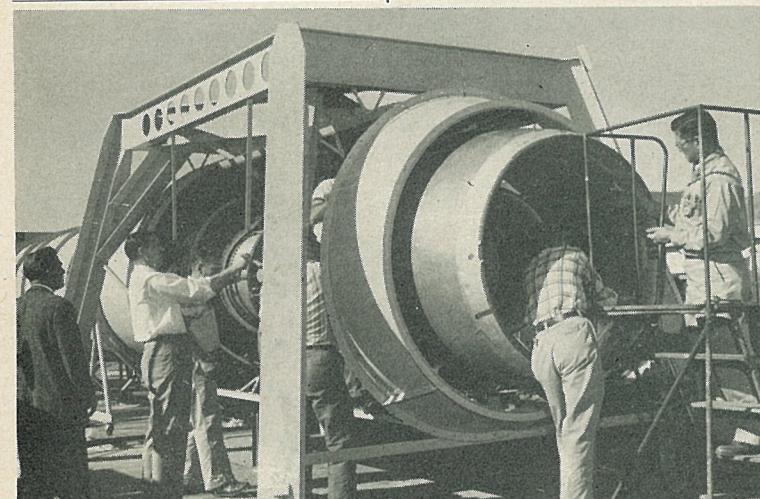
Cold weather tests are the technical responsibility of the SD thermodynamics group under Vic Hudson. Hudson will be at Hopkins as Federal Aviation Agency designee. F. J. Hekking of the thermo group will act as test coordinator, assisted by Richard O'Neill, also of thermodynamics, and William Michael, from thermodynamics lab. V. L. Booth of SD propulsion design group, who was in charge of test stand design, will be at Hopkins during initial installation, as will two Dept. 31 technicians, L. E. Roberts and George Lutz.

Research, Inc. constructed the foundation and test facility under an assist subcontract for Convair.

General Electric representatives, Ross Anderson and Carl Carden, will accompany the GE engine to the test site. This particular engine is slated for return to Convair SD early next spring for tests at the SD seaplane ramp.

LIAISON GROUP PLANS REUNION

A reunion for the F-102 liaison engineering group at Convair SD's Plant 2 (active 1952-1954) is planned for this Friday (Dec. 11) at Little Bavaria on Sorrento Road at 7 p.m. For information, contact Ed O'Connell, ext. 241, SD Plant 2.



READY FOR TESTING—Vernon Booth of Convair SD engineering and Willard Martin, Dept. 31 assistant foreman, watch final assembly of Convair 600 anti-icing test stand in Convair SD experimental yard before shipment to Minnesota. Assemblers, all of Dept. 31, are B. A. Shourds, R. S. Mendoza, Frank White, Gene Pollpeter, L. A. Salgado.

Mobile Air Conditioner Cools Atlas Components For Checkouts, Firings

Convair Astronautics has developed a unique portable air conditioning unit for use during certain Atlas missile operations. Although compact, it is capable of cooling 25 average San Diego homes.

Measuring only 8 by 12 feet and weighing some eight tons, the unit helps maintain constant low temperatures in compartments housing intricate Atlas missile components and systems. It functions during checkouts, static firings and until seconds before actual launching.

End product of a development program almost as old as the Atlas itself, the unit was designed by Astro's Bill Stacey of plant engineering. Four such units have been ordered. Two are on hand now at Astro's Air Force Missile Test Center base.

Without adequate cooling temperatures within component compartments range well over 100 degrees, often causing failures or malfunctions. Astro began investigating portable cooling systems early in the design of the Atlas. Commercial units available lack sufficient capacity for the job. Too, most refrigeration units utilize water in operation. Moisture is a potentially dangerous element around missile components.

"We launched our development program on a crash basis," said W. J. Stanley, Astro's chief plant engineer. "Bill Stacey was assigned to the job and has been with it since."

The present unit features a unique cycling operation. Air is first cooled, then expanded through heating to remove moisture and re-cooled.

Designed to operate on a self-sustaining basis, the unit includes its own protection from the elements. Louvered doors, plus removable panels, protect the unit, but can be removed for maintenance purposes. Only electrical power and ducting to carry off the air is needed for operation.

When used at launch sites, the unit is set up some 150 to 200 yards from the Atlas. Pipes funnel the chilled air to a connection on the missile. Internally, the air is carried through a series of perforated ducts.

In operation the unit produces some 2,280 cubic feet of standard air per minute. This leaves the coils at a temperature of 20 degrees and enters the piping at a speed of 600 miles per hour.

Maximum allowable temperature within compartments is 40 degrees with an average of 35 degrees being maintained at all times.

Controls on the test conductor's console within the blockhouse activate the unit during countdowns. The connection between the supplying pipes and the missile is broken just seconds before launch takes place.

Some idea of the urgency of the operation is reflected in the

time the unit is put into operation after leaving the manufacturer's shop in San Diego. This is only 10 days! Three days are used in checking out the system at Astro on a 24-hour basis. Three days are allotted for transportation via truck to Florida, then the remaining four days devoted to set up and checkout.

Units similar to this are in use at all test bases and Vandenberg AFB. Other units are destined for Air Force operational bases following proofing at Astronautics.

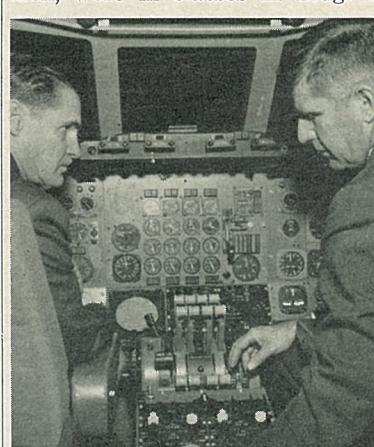


COOL, MAN, COOL—Astronautics-developed portable air conditioning unit cools missile components during checkout, static and actual firings. It is self-sustaining. Bill Stacey, right, plant engineer, checks controls while Fred Antelline, manufacturer, looks on. Two such units are now on hand at Astro's AFMTC operation.

Delta Airlines Crews' Ground School to End

Final ground school for Delta Airlines flight crews, being conducted by Convair San Diego production flight, is due to end Dec. 18.

During the latter part of November, the second and third Delta groups, totaling about 40 men, were in classes in Bldg. 4



COCKPIT CHECK-OUT—T. P. Ball, Delta Airlines superintendent of flight operations (left), receives briefing in Convair 880 cockpit procedures trainer from W. B. Harwell, SD chief of production flight.

training quarters at SD Plant 1. Second class concluded the day before Thanksgiving, leaving 18 Delta men remaining in the last class.

Delta Airlines is scheduled to take delivery on its first Convair 880 in January. A Convair SD flight captain and flight engineer-instructor will accompany the plane to assist in 880 training at the Atlanta, Ga., headquarters.

Next 880 training classes to be given by SD production flight will be for Federal Aviation Agency representatives. Two courses have been scheduled, one to start Jan. 4 and the other, Feb. 8, said P. H. Selby, production flight training supervisor.

FAA flight inspectors, whose task is to certify pilots, and FAA maintenance inspectors, who certify flight engineers, will be given a four-week ground school, climaxed by a fifth week of cockpit procedures trainer indoctrination and five hours each of actual flying.

Three FAA representatives were in San Diego from Atlanta, Kansas City, Mo., and Washington, D. C., to take 880 ground school training with the second group of Delta Airlines personnel.



FINAL CLASS—Third, and last, group of Delta Airlines flight crews are now in final weeks of ground school training at Convair SD. T. P. Ball, Delta superintendent of flight operations, is at extreme right. Convair men are Jack Rogers (far left), SD flight engineer-instructor; Larry Brandvig, 880 pilot (third from left); and L. W. Hughes, SD training coordinator (third from right).

NEWS FROM OTHER DYNAMICS DIVISIONS

General Dynamics Corporation, created in April, 1952, as successor to Electric Boat Company, is composed of six divisions and a Canadian subsidiary, Canadair Limited, of Montreal, airframe builders. The divisions are:

Convair, head offices at San Diego, Calif., aircraft, missiles, and space systems.

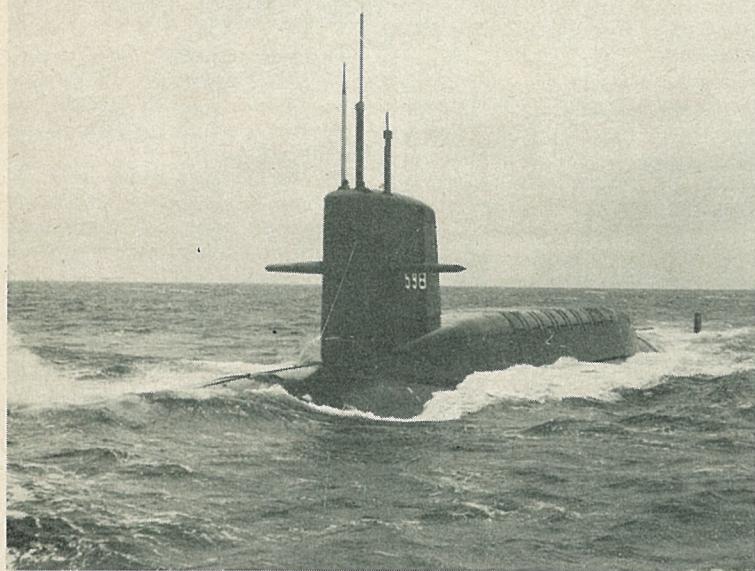
Electric Boat of Groton, Conn., submarines.

Stromberg-Carlson, of Rochester, N. Y., telecommunications, electronic equipment.

Liquid Carbonic of Chicago, Ill., carbon dioxide producer, industrial and medical gases.

General Atomic of San Diego, Calif., nuclear research, development, production.

Electro Dynamic of Bayonne, N. J., electric motors, generators.



INAUGURAL—Nuclear powered submarine George Washington made two-day cruise through waters of Long Island Sound last month on first builder's trials. On board for trials was Vice Adm. H. G. Rickover, USN. Submarine, launched June 9, will be equipped to fire Polaris ballistic missiles from submerged positions. It was built by General Dynamics' Electric Boat Division.

Study Aims at Cutting Rates For Air Freight

MONTRÉAL—A joint sales research program to develop a break-through tariff which will bring air freight rates down to levels competitive with many truck and rail freight rates has been announced by The Flying Tiger Line and Canadair Limited.

The two companies have agreed on a program and supporting budget which will involve an expenditure of approximately \$200,000 in the next year.

Research staffs will include consultants nationally known in air freight traffic development.

A joint statement said:

"Our two companies have joined in this venture for mutually beneficial reasons. Canadair, as builder of the CL-44D, which will be the first turboprop swing-tail air freighter, is vitally interested in the economics of low-cost air freight. Flying Tiger has

on order a fleet of 10 CL-44D-4's, which it will place in service in 1961. The airline is seeking a tariff for this new airplane which will effect a break-through into freight rate areas on an average of 30 to 40 per cent under today's existing rates.

"We believe that rates as low as six cents a ton mile are possible with the CL-44D-4 and that we can achieve an average rate of some 13-14 cents, compared to the existing average of 18-19 cents.

"Studies previously made by Professors Brewer and Ulvestad clearly indicate that such rate should create an air freight market from seven to 10 times today's volume."

Stromberg-Carlson Radio Output Upped

ROCHESTER—Full-scale production of custom auto radios for 1960 cars has begun at Stromberg-Carlson.

Featuring 35 different custom models in both manual and push-button, the new line has been engineered and produced to meet high fidelity standards.

The use of transistors in the audio power supply has eliminated the vibrator, with its common hum and noise interference, and has created a greater dependability.

Reception of the new line was so enthusiastic that the initial production order of 850 per day was increased to 1,150.

Air Force Contract With S-C Increased

ROCHESTER—The U. S. Air Force has awarded a \$9,384,733 increase for a development contract to Stromberg-Carlson Division.

The additional contract, which will be administered by the Rome Air Development Center for the Air Research and Development Command, calls for changes in the design of a complex reconnaissance system. It will bring the total cost of the research to date to \$26,907,062.

General Dynamics Ad Program Will Emphasize Vision, Reality

NEW YORK—With a "Vision & Reality" theme, General Dynamics Corporation last month launched its 1960 advertising program.

The initial ad featured TRIGA, General Atomic's inherently safe research, training and isotope producing reactor. Each subsequent advertisement in the series will present a particular product of General Dynamics and link the product to the philosophy and foresight that led to its development. An unusual aspect of the ads is that the text will be

printed in English and a foreign language. This approach is designed to identify General Dynamics to millions of readers throughout the world as the builder of famous products, at the same time advancing a corporate image of scientific creativity and vision.

Publications carrying the first advertisement included The Saturday Evening Post, Time, Time-Atlantic, Time-Pacific, Time-Latin America, New York Times Magazine, The New Yorker, and leading media in Europe and Asia.

Reactor Scheduled For Kansas Campus

MANHATTAN, KAN.—A versatile and inherently safe General Dynamics TRIGA reactor will be installed on the campus of Kansas State University here to train students in the rapidly expanding field of industrial uses of nuclear energy.

TRIGA, conceived and developed by General Atomic Division, also will be used for engineering, physical science, agricultural and biological research.

Sub Launching Set For Dec. 19

GROTON—The fifth nuclear submarine to be launched this year and the first sister-ship of the swift, deadly USS Skipjack, will slide down the ways here at Electric Boat Division Dec. 19.

The Scorpion, namesake of a valiant World War II submarine lost in action, is an identical twin of the Skipjack, world's fastest and most maneuverable submarine.

Like her record-setting sister, the Scorpion will be not only an attack submarine but also the most versatile anti-submarine weapon now known.

JOHN WILD TO JOIN ATOMIC DIVISION

SAN DIEGO—John M. Wild, developer of a three-dimensional boundary layer theory of aerodynamics, will join General Atomic Division as director of Project Orion.

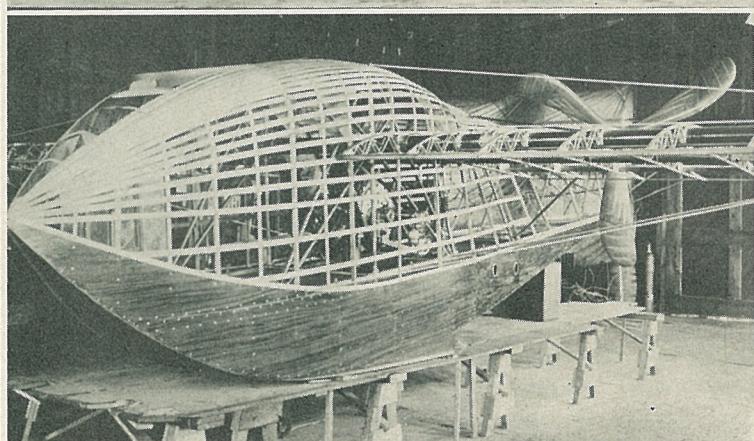
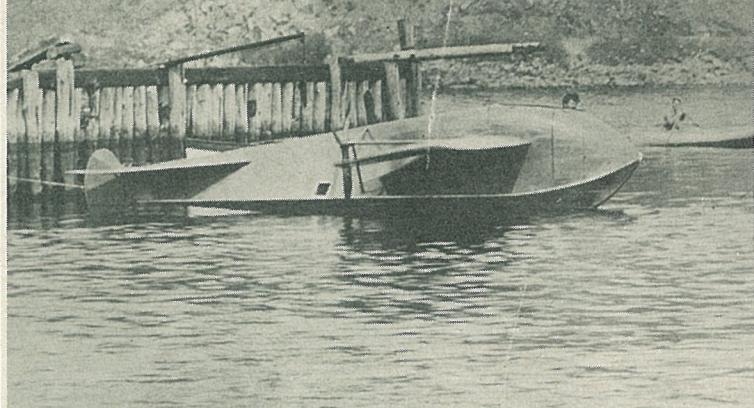
Wild will also become assistant director of the John Jay Hopkins Laboratory for Pure and Applied Science.

Project Orion is General Atomic's program for using controlled nuclear pulses for propulsion of vehicles in space.

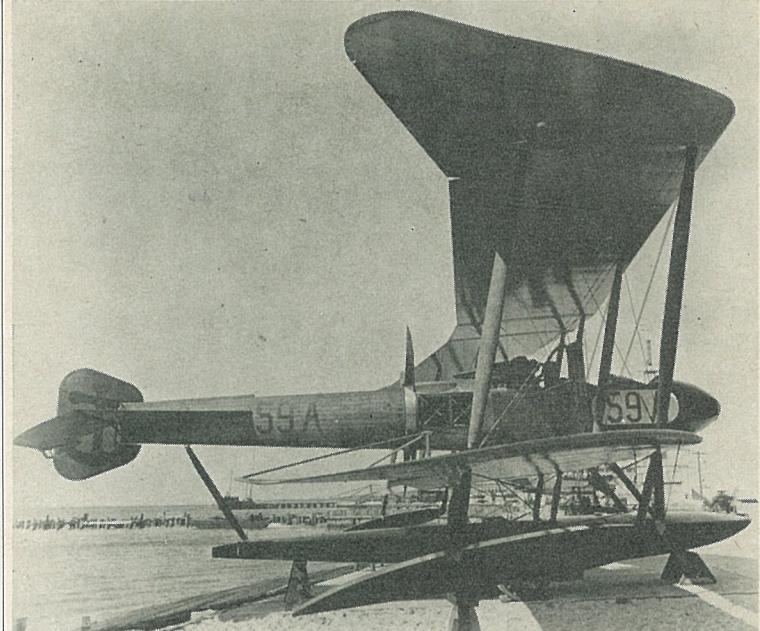
Navy Communication Contract Awarded

ROCHESTER—Stromberg-Carlson Division has received a \$1,200,000 contract for the design and development of an advanced, completely transistorized single sideband communication system for U. S. Navy Bureau of Ships.

It is expected that the use of single sideband techniques will greatly increase the reliable range of ship-to-ship and ship-to-shore communication, at the same time achieving a substantial reduction in weight, space and power requirements.



GALLAUDET B—Construction photo, probably 1914, shows mahogany sheathing added to lower hull. Note single tubular steel spar in wing, aluminum tube trussing of ribs.—Smithsonian Institution photos.



GALLAUDET D-1—Pusher seaplane, pictured at Pensacola in 1917, was driven by four-bladed propeller revolving around drum mounted in fuselage. Two-place cockpit is far forward. "Terrific speed" discouraged pilots from accepting D-1 flying boat.

Weighty Problem

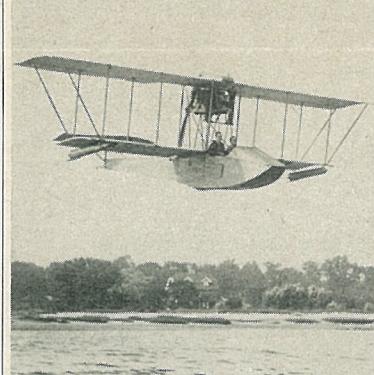
Water Absorbing Boat Hulls Headache to Early Designers

(Before this installment-form history of Convair veers back to Consolidated Aircraft, after touching on Gallaudet, Thomas Bros. and Thomas-Morse, tributaries to Convair's historical main stream, readers will find some interesting material this week concerning early day seaplanes.)

* * *

After Jan. 26, 1911, when Glenn Curtiss made his first take-offs and landings on San Diego Bay, aviation took to the water.

Curtiss used a pontoon-fitted



THOMAS B—Two-place pusher of 1914 had broad, flat hull, sheathed with galvanized iron to keep wood from absorbing water, and increasing weight.

pusher biplane, and flew from old Spanish Bight, a shallow inlet since filled and made a part of North Island Naval Air Station.

At Bath, N. Y., Thomas Brothers followed suit on Lake Salubria. First flight dates are obscure, but in later years the company reported having built "several" flying boats during 1912 and 1913. Pontoons also were fitted to a Model TA biplane, a 1911 land machine.

The Thomas Brothers Model B was two-place. An Astro-Daimler engine, 90 hp, drove it 65 mph. The Thomases had trouble with early wood hulls absorbing water and adding weight. Several 1914 hulls were of reinforced wood frame covered with 30-gauge galvanized iron sheet.

Gallaudet's flying boat B was designed by E. F. Gallaudet. Its lines loosely resembled his 1912 A-1 Bullet monoplane (Convairity, Feb. 4, 1959). The hull was mahogany, the pilot's position ahead of the leading edge. The B boat, a monoplane, was built at Norwich 1913-1914. It was powered by a Maximotor engine, 110 hp, with two three-blade pusher props driven through a system of shafts and bevel gears.

Most remarkable of the early seaplane designs was the Gallaudet D-1. Its four-bladed propeller spun on a mounting drum inside the fuselage. Built in 1915-1916, one was delivered to the Navy. Wing span was 48 feet, length 33 feet, with 4,000 lbs. "net" weight. Wings were wood and fabric with swept-back edges, chord increasing toward the tip. Power was from two Dusenberg engines, 150 hp each. As described by Gallaudet: "The fuselage is divided . . . and the two parts thus formed are joined by a large steel drum. . . . The propeller has a much enlarged hub which surrounds this drum and is carried on it by large ball bearings. The propeller hub carries a large internal gear which is driven at two-thirds engine speed by means of a pinion bolted to the inside of the steel drum. This pinion is in turn driven through a flexible coupling by the engine."

The inventor argued that this arrangement exposed only the efficient proportion of the propellers to the air stream, diminishing drag. A contemporary criticism was that the aft fuselage and tail section, hanging on the drum's internal mounting flange, sometimes wobbled.

The D-1 porpoised and partly sank by the nose during company testing. Crews worked day and night to repair it for Navy inspection. It was shipped to Pensacola and flown by Lt. Phil Rader, accepted in 1916 and assigned BuNo A-59. A Gallaudet brochure of 1920 reported "such terrific speed (for that period) that pilots could not be induced to accept the machine as a regular charge."

Bowling, a Bowler, Rolls 129 Triple

There's no shortage of "bowls" in this report.

Oscar Bowling bowled a triplicate 129 recently while bowling at Bowlero. Bowling is a swing shift league member who normally carries a 144 average.

Astro's Wives Club Plans Lunch Meeting

Astro Wives Club members will combine their regular December monthly meeting with a luncheon at 11:30 a.m. Dec. 16 at the Dragon Room, Shelter Island Inn.

Luncheon cost will be \$2.75 per person. Guests are asked to bring \$1 gifts for exchange.

Reservations may be made by contacting Dixie Husted at CY-5-0593 or Marlene Parisa at BR-3-0979 no later than noon, Dec. 16.

Log Book Entries

Promotions

ASTRONAUTICS

Promotion to or within supervision effective Nov. 23.

Dept. 110-0, Contracts: To contract administrator, C. W. Power.

Dept. 250-2, Plant Engineering: To plant engineering proj. contr. asst. supervisor, K. D. Ostermeyer.

Dept. 327-0, Support Documentation: To parts documentation asst. supervisor, G. B. Grenolds. To parts documentation supervisor, V. C. Pauls.

Dept. 344-2, Support Operations: To foreman, Robert Mitchley.

Dept. 537-3, Engineering Design: To asst. design group engineer, E. J. Huisak.

Dept. 772-0, Primary & Final Assembly: To asst. foreman, F. D. Gilliam.

MSTS

Dept. 575, Convair Operations: To asst. test conductor, C. A. Notar, H. R. Pearson. To inspection asst. supervisor, C. A. Seaver, G. E. Watkins.

OFFUTT AFB

Dept. 612, Convair Operations: To material general supervisor-base, F. J. Corridon. To plant engineering surv. supervisor, J. V. Draggie. To facility records & control supervisor, H. J. Ferguson. To plant engineering surv. asst. supervisor, R. C. Hawkinson. To receiving & stores asst. foreman, W. C. Hodges.

VANDENBERG AFB

Dept. 576-1, Convair Operations: To asst. test conductor, R. V. Teague.

WARREN AFB

Dept. 611, Convair Operations: To asst. foreman, LeRoy Baldrige. To inspection asst. supervisor, J. B. Wiggins.

Service Emblems

ASTRONAUTICS

Service emblems due during the month of November:

Twenty-five year: Dept. 250-0, F. S. Perkins.

Twenty-year: Dept. 773, W. B. Vosken.

Fifteen-year: Dept. 322-7, Marilyn C. Gates; Dept. 344-1, W. F. Heftin; Dept. 403-0, A. J. Kunde; Dept. 722-1, Pluma R. Huddleston; Dept. 771-0, H. E. Deyie.

Ten-year: Dept. 214, Helen M. Yturralde; Dept. 220, L. R. Potter; Dept. 401, Howard Verby; Dept. 771, W. E. Stevens.

Service emblems due during the period Dec. 1 through Dec. 15:

Twenty-year: Dept. 215, C. E. Birch; Dept. 771, J. P. Miller Jr.

Fifteen-year: Dept. 772, W. P. Sellars.

Ten-year: Dept. 220, F. L. Maxwell Jr.; Dept. 535, E. A. Gaut Jr.; Dept. 549, C. R. Ceary.

SYCAMORE

Service emblem due Nov. 26:

Ten-year: Dept. 573-3, B. C. Simmons.

Personals

ASTRONAUTICS

Our heartfelt gratitude to the many personal friends and associates of Benjamin M. Bender, throughout Convair, for the warm friendship and expressions of sympathy and understanding as evidenced by the multitude of messages, cards and beautiful floral offerings.

Mrs. B. M. Bender and family.

Births

ASTRONAUTICS

LAWTON—Twin daughters, Kathy, 7 lbs., 13 oz., and Susan, 7 lbs., 5 oz., born Nov. 4 to Mr. and Mrs. G. N. Lawton, Dept. 325-2.

LEIKER—Daughter, Linda Marie, 7 lbs., 8 1/2 oz., born Nov. 6 to Mr. and Mrs. William (Mary) Leiker, Dept. 130-6.

PAYNE—Daughter, Julie Ann, 7 lbs., born Oct. 14 to Mr. and Mrs. Thomas R. Payne, Dept. 215-2.

CAPE CANAVERAL

MARSH—Daughter, Esther Marie, 7 lbs., 6 oz., born Nov. 7 to Mr. and Mrs. R. B. Marsh, Dept. 571-3.

MASSAROS—Daughter, Dorothy Susan, 8 lbs., 8 oz., born Nov. 6 to Mr. and Mrs. George Massaros, Dept. 571-3.

PACE—Daughter, Yvonne Dawn, 4 lbs., 15 oz., born Nov. 7 to Mr. and Mrs. Cecil B. Pace, Dept. 571-3.

WAKEFIELD—Son, Richard Norris, 8 lbs., 1 oz., born Oct. 30 to Mr. and Mrs. Dale Wakefield, Dept. 571-4.

WARRIOR AFB

BYRNE—Son, Scott Ray, 7 lbs., 13 oz., born Oct. 7 to Mr. and Mrs. J. T. Byrne, Dept. 611-1.

GORDON—Son, Donald Dwight, 6 lbs., 6 oz., born Oct. 31 to Mr. and Mrs. J. D. Gordon, Dept. 611-1.

Deaths

ASTRONAUTICS

MUNSON—Anna Mae, Dept. 215-1. Died Nov. 21 following heart surgery. Survived by husband, Archie L. Munson.

Wives Arrange Busy Schedule

CAPE CANAVERAL — This week will be a busy one for members of the Convair Wives Club here.

Today (Dec. 9) a Christmas luncheon was staged at the Rockledge Country Club which included invitations to all wives of missile contractors and military personnel in this area. Mrs. John Swigart was chairman for the affair.

Saturday (Dec. 12) a benefit dance for the Brevard County Crippled Children's Clinic in Melbourne will be held at the Cocoa Armory starting at 9 p.m.

Charlie Phelps, an Astro employee, and his band will play.

A Space Dance staged during November netted \$200 for the purchase of a tape recorder for the same clinic. The recorder will be used in speech correction work. Mrs. C. R. Jackman, president, presented the check to officials of the clinic.

AF Officer Winner In CRA Chess Event

J. E. Patterson, an Air Force officer training at Astronautics, was winner of one of two turkeys awarded recently by Astro Chess Club.

Lieutenant Patterson won the speed tournament, while Commissioner John Horning won the elimination event.

Next chess meeting will be held at 7:30 p.m. Dec. 17 in the Astro cafeteria. All chess players are invited to attend.

Astrolens Members Plan Xmas Dinner

A Christmas dinner and election of officers will highlight a Dec. 14 meeting of the Astrolens at 6:30 at the Astro executive dining room, Commissioner Ken Rinker reports.

In addition, the best print and slide of the year will be chosen from winners of quarterly contests. Judge is E. H. Boldrick, Astro's chief of still photography.

Members will pay the \$3 dinner cost.

Astro Autos Place In Palomar Rally

Astro Sports Car Club members finished well "in the money" during the recent "Palomar Rally of the Stars."

George Kendall and Tom Kienholz took third place; Bill Rector and George Blondin finished eighth; and Jack and Jean Stephens copped 13th place.

The three-car team of Rector-Blondin, Stephens-Stephens, Sandy Evans and Dick Mobraaten also took third place.

Astro Tennis Team Downs Solar Netters

Astronautics netters swept six of seven tennis matches Nov. 29 when they met a team from Solar Aircraft for the first time.

John Cannau, Carl Shuler, Ron Kerr and Bill Crabbe won singles matches for Astro. A doubles team of Crabbe and Ron Madonia won one of two doubles events. Kerr and Shuler bowed to Solar in the other match.

Astro Club to See Old Roman Coins

Coins from Imperial Rome will be highlighted at a 7:30 p.m. meeting Dec. 16 planned by the Astro Coiners, Commissioner Joe Garside reports.

Color slides of these coins are being obtained for use at the meeting which will also include a coin auction and the awarding of a display trophy as a prize. Refreshments will be served.

Rockhounds Gather For Xmas Party

Astronautics Rockhounds held their annual Christmas party last night (Dec. 8) at Uptown Hall.

Events included special choral numbers, a visit by Santa, door prizes, movie cartoons and gifts for the very young.

Shop Hoop Teams Meeting Tomorrow

The "first and only" organizational meeting for shop league basketball at Convair SD will be held tomorrow (Dec. 10) at 5 p.m. in the CRA Clubhouse on Pacific Hwy.

All departmental representatives wishing to enter teams are urged to attend. Gil Crosthwaite, commissioner, said eligibility, rosters, rules and nights of play will be decided at the meeting. League play is scheduled to start the week of Jan. 4.

Bonita Sweeps Next Turney For Golf Club

Christmas hams will be prizes for winners at the next Convair Golf Club tournament scheduled for Dec. 19-20 at Bonita.

Entries are now open. Deadline is Dec. 16. San Diego golfers can make reservations with Alma, ext. 218, Plant 2; Astro golfers call Hal Purnell, ext. 1313, Astro.

Results of the tourney held Nov. 21-22 at Flying Hills included 16 turkey winners in four flights. Turkeys were awarded low gross winner in each flight and first, second and third low net.

In the first flight, Art King (Dept. 150 Astro) took low gross honors with a 71. Low net awards went to M. Goodall (Dept. 214 Astro), Jim Lothringer (Dept. 6 SD), and Wayne Boring (Dept. 551 Astro).

R. C. Vones (Dept. 603 SD) won low gross with a 77 in the second flight. First low net to R. Tobias (Dept. 541 Astro), followed by G. A. Hillis (Dept. 292 SD) and H. C. Van Buren (Dept. 292 SD).

Third flight low gross winner was K. Eastin (Dept. 69 SD). Filling in low net ranks were E. L. Williams (Dept. 100 SD), C. Ganger (Dept. 400 SD), and E. G. Farr (Dept. 181 SD).

All four turkey winners in the fourth flight were from Convair SD. R. L. Lecuyer (Dept. 25) shot an 81 for the low gross. Top three low netters were H. Schroeder (Dept. 25), Jim Flitters (Dept. 15) and W. Heath (Dept. 25).

GUN CLUB SLATES HOLIDAY TOURNEY

A variety of Christmas gifts will be prizes at a holiday shoot Dec. 19-20 planned by the Convair SD and Astronautics Gun Club at the CRA range, Gillespie Field.

Saturday competition will start at 1 p.m.; Sunday shooting starts at 9 a.m. and will progress through the day. Events will include skeet, trap and rifle in addition to novelty categories.

Novices, as well as experienced gun enthusiasts, will have an equal opportunity to win prizes. Merchandise awards will go to winners in each squad.



COST CUTTER—A. H. "Red" Kimble (Dept. 110) received MacSave-it award for October at last Convair SD Management Club meeting. His CIP will save Convair an estimated \$65,000.

Two Drivers Surpass 100 mph In Sports Car Speed Event

Speed, a seldom required item in most sports car events, was the word recently when Astro Sports Car Club staged a one-quarter mile snail drag at Hour Glass Field.

Top speed of the day was reached by Wally Edwards (San Diego Division) with a 108.04-mile-per-hour run. He drove his "Wright Special." Joe Flores, also of SD, won the elimination run with a "Siata-Corvette." His time was 104.65 mph.

In the over-four litre sedan class, Jack Bowers drove his 1958 Plymouth "Fury" 87.80 mph.

The 1,300-2,000 cc class, largest in entries, found Dale R. Dollison first in a TR-3 with a speed of 74.93 mph. Mort Rosenbaum was

second in his Arnolt-Bristol with a clocking of 79.36 mph.

Turkeys were presented winners.

Next meeting will be 7:30 p.m. tomorrow (Dec. 10) at the Astro executive dining room. Bill Lester will talk on Ferrari automobiles. Trophies for the recent event will be awarded.

13 Pass State Engineer Test

Thirteen Convair men representing Astronautics and San Diego plants recently passed the California Professional Engineers Examinations.

Eleven of these were mechanical engineers, one an electrical engineer and one a civil engineer. All are now registered engineers in California.

The mechanical engineers included D. W. Gilbert, A. Segal and J. S. Gacho, all of SD's Dept. 6-35; L. H. Bakken and G. C. Winingar of SD's Dept. 6-31; J. H. Dowdy of SD's Dept. 6-51; J. K. Neary of SD's Dept. 6-80; P. F. Taesler of SD's Dept. 25-4; D. E. Merriam of Astro's Dept. 250-2; D. F. Postula of Astro's Dept. 595-1; and R. H. Thomas of Astro's Dept. 535-7.

Astro's C. G. Erickson of Dept. 547-3 was the electrical engineer and F. K. Killman of Astro's Dept. 250 was the civil engineer to complete the program.

To prepare for the next state examination the University of California Extension will start a new course in January. Further information about the program may be obtained through the State of California office, 3443 University Ave., AT-1-0427.

Bonham Brothers Tickets on Sale

Tickets for the Bonham Brothers band concert and variety show Dec. 21 at the Russ Auditorium are being sold at Convair SD employee services, Plants 1 and 2.

Many of the band members are sons of Convair parents. Proceeds from the concert will help defray expenses for the band when they represent the California and Nevada Lions Clubs at a parade in Chicago next July.

Benefit Is Planned For Square Dancers

Square dancers from both San Diego and Astronautics have been invited to take part in a "Toys for Tots" dance at 8 p.m. Friday (Dec. 11) at the La Mesa Elementary School, Acacia and

CRA Sports & Recreation Convairiety

Astronotes Facing Busy Xmas Singing Season

Astronotes, mixed chorus at Astronautics, have mapped a full schedule of appearances for the coming Christmas season, CRA Commissioner C. P. Rolla reports.

A Christmas party for the group was held Monday (Dec. 7) at the home of a member.

Last night (Dec. 8) the Astronotes provided a quartet to entertain those attending the CRA Rockhounds' Christmas party.

Tonight (Dec. 9) the chorus will be out in force to entertain the Astronautics Management Club at El Cortez Hotel.

Sharp Hospital patients will hear a program of Christmas carols by the group from 7 until 7:30 p.m. Dec. 14.

Between 7 and 8:30 p.m. Dec. 18 the Astronotes will sing for Navy Hospital patients in the Red Cross Recreation Room.

Plans call for the chorus to entertain participants in the Dec. 19 Astronautics party for needy children at noon in the Astro cafeteria.

The Christmas season will wind up Dec. 21 with Christmas carols for Mercy Hospital patients between 7 and 8:30 p.m.

CRA has provided blouses for

Astro Boat Builders Will Join With SD

Tentative arrangements are being set up by the Astro Fishing Club for Astronautics employees to participate in a Convair SD fiber glass boat building project, Commissioner Bob King reports.

Both 16 and 22-foot boats will be included. Builders will assist others, then have assistance in their own project under the group plan. Molds are available for both cabin and open craft of both sizes.

So that some indication of interest may be obtained, those desiring more information are asked to call R. D. Arnold at ext. 3378.

Convair Wives Help In Annual Bazaar

WARREN AFB—Wives of Astronautics employees here took part in the annual Bazaar of the DePaul Hospital Guild held Nov. 18-19.

Proceeds will be used for a continuous service project at the hospital and to buy hospital equipment.

The bazaar featured individual needlecraft, art work and home decorations. Several Convair wives contributed articles for the sale, according to Mrs. George Calvert, wife of Astro's operations manager here.

female members and ties for both men and women for the coming appearances.

Regular rehearsals are staged at 7:30 each Monday night in the Astro cafeteria. All interested in singing are urged to attend.

Directors of the chorus are Bob Craig and Jim Rogers. Both have extensive backgrounds in music and choir work.

Schneider and Legg Win Turkey Awards

Roland Schneider (Dept. 454) and Glenn Legg (whose wife is in Dept. 150) won turkey awards at a November Astro Pistol Club event. Both men hit 19 of a possible 25 moving turkey targets.

The .22 Police Course event went to Ron Boothe of Dept. 120 who also copped top honors in the Short National event. Ken Bunker (Dept. 131-1) won the expert class and Joe Miller (Dept. 771) the marksmen class of the Police event. Ken Bunker and Russ Oliver (Dept. 131) finished in that order behind Boothe in the Short National.

Dec. 13 will see a second turkey shoot at the San Diego Police Pistol Range. Firing begins at 9 a.m.

Bowling, Swimming Programs Studied

WARREN AFB—Two programs for wives and children of Astronautics employees have been set up tentatively by the new Convair Women's Activities Group here.

A move toward a bowling league was made Dec. 2 at the Bowlerama in Cheyenne at a luncheon meeting. Play will begin in the near future. Those interested may contact Shirley (Mrs. D. R.) Brown at 2-2297 or Dawn (Mrs. J. P.) Gore at 8-8546.

A swimming program is pending. Interest will dictate how many classes will be formed. Those desiring information are asked to contact Joan (Mrs. H. S.) Jensen at 8-8152.

Calvert Given Scroll By 13th Air Division

WARREN AFB—George C. Calvert, Astronautics operations manager here, has been made an Honorary Missile Man with a special scroll presented by the 13th Air Division.

Col. William S. Rader, 13th commander, honored Calvert at a Nov. 19 meeting. Rader cited Calvert's role in the missile mission at Warren AFB.



BAZAAR SCENE—Astro wives at Warren AFB took part in DePaul Hospital Guild Bazaar at Cheyenne recently. From left are Mrs. Ed Snyder, Mrs. Russell Wilcox and Mrs. George Calvert, Astro wives, Mrs. Rose Smith, bazaar chairman, and Mrs. Walter Murphy of Cheyenne.



JOY TO THE . . . —Astronotes, CRA-sponsored mixed chorus, has full schedule of appearances arranged for Christmas season. Here they run through group of carols. More singers are needed to fill ranks. Photo by Ken Rinker, Astrolens.

Plant Bowling Tourney Set

Entries are now being accepted for the second annual Astronautics CRA plant bowling championship to be staged Jan. 23-24 and Jan. 30-31 at Clairemont Bowl, Commissioners Willard Brassell and Jack Boyle reports.

Astro currently counts more than 1,500 active bowlers between the ages of 8 and 72 years. An all-time record participation is anticipated in the pending championship, Boyle said.

All money paid in will be reverted to prizes with an award for one out of every 10 participants.

In addition to individual trophies for each event, a departmental perpetual trophy is being prepared for winning team entries.

Deadline for entries is midnight, Jan. 15. Application forms are available now through employee services, the bowling commissioners and a special bowling committee, members of which aid Astro administration of the widespread program.

Astro Fishing Club Plans River Jaunt

Astro Fishing Club members will elect officers and formulate plans for an early 1960 group fishing excursion to the Colorado River when they gather at 7 p.m. in the Astro cafeteria Dec. 15, Commissioner Bob King reports.

Sixteen members hauled four boats to the Salton Sea over the Nov. 28-29 weekend for a full round of activities.

All employees or members of their families interested in fishing are invited to attend. King may be reached at ext. 628 and Clay Castee at ext. 3480 for additional information.

Christmas Bridge Party on Schedule

Astro bridge fans will feature a special Christmas party as part of their activities Dec. 17 at a Barcelona Bridge Club meeting.

Door prizes and full master points will be included in the program. Refreshments will be available.

197 Average Posted In 48-Game Series

WARREN AFB—Bill Martin of Astronautics operations here racked up a commendable average of 197 pins per game in a 48-game series in the recent Wyoming Bowling Proprietors of American Association Tournament held here. He placed second.

Martin, office services assistant supervisor, was Tri-State all events champ here in 1957-58 and is the former (1953-54) world-wide Air Force champion.

Astro Hardball Nine Leads in First Half

Astronautics baseball fortunes have never been higher. The CRA hardballers wound up the first round in winter play in the Industrial League in first place.

A 21-5 victory over the USS Ticonderoga nine Nov. 29 ended first half play. Astro opened the second half over the past weekend with a game with the San Diego Police Dept. team.

Games are played each Sunday. Local papers carry schedules and playing sites each Sunday morning.

Flag Football Climax Near

Flag football season winds up next week at Convair Astronautics and from all indications champions of first and second shift leagues will be ready for a playoff shortly after Christmas for the plant title.

Dept. 325 seemed to have the inside track in first shift play, having won eight straight games. Depts. 541 and 214-1 won six, lost one and tied one for the year to date. Dept. 537 has six wins, two losses and one tie. Other teams in the loop are strung out behind.

In second shift play the Spartans copped six straight for the only unbeaten record. Tooling has won three, lost one and tied one for second. The Trojans have a 2-2-1 record; Barnard School Air Force, a 1-3-0 mark; and the Missile Men a 1-4-0 record in won-lost-tied games.

Bobby Poole Named To Head Cape Golf

CAPE CANAVERAL—A new co-commissioner for CRA golfing activities among Astro employees here has been appointed. He is Bobby J. Poole.

Melbourne Country Club was the site for a Nov. 22-23 turkey sweepstakes events. Dec. 5-6 has been reserved for a Christmas affair at the New Smyrna Country Club, according to Dave Ljungquist, a co-commissioner.

During February a championship event will begin, to conclude in March, Poole reports.

Ice Skaters Slate Christmas Party

Astro ice skaters will celebrate Dec. 22 with a special skating Christmas party at Iceland, 6055 Lake Murray Blvd., Commissioner Bud Davies reports.

Beginning at 6:30 p.m. the affair will feature games for the children, a grand march, prize drawings for two turkeys and refreshments for all. The party ends at 8 p.m. The regular instruction session will not be held.

Skiers Offer Free Lessons

Plans for a long weekend skiing trip, plus tentative plans for offering free "dry land" instruction, will be on the agenda when Astro snow skiers gather at 7:30 p.m. Dec. 17 in the executive dining room.

Experienced skiers have offered to provide instruction to any CRA member. Bill Witzell at ext. 3593 will answer questions. Classes will be started, if sufficient interest is shown.

A group trip to Mammoth Mountain and Squaw Valley is planned for the New Year weekend. Final plans will be mapped out at the meeting, Commissioner Bob Weaver reports. Those unable to attend but who wish to make the trip are asked to call Weaver at ext. 1918; Witzell at ext. 3593; or Ron Grant at ext. 2167 before the meeting. A movie will also be shown.

'Chop Suey' Turney Scheduled Dec. 20

"Chop Suey" for turkeys! That's the plan of Astro tennis players who will conduct a chop suey tournament Dec. 20 at Morley Field. Turkey prizes will be awarded winners.

Entries close Dec. 18. Pat Bonner at ext. 3125 will furnish details to those interested.

Basketball Season Under Way at Cape

CAPE CANAVERAL—Basketball season is well under way in this area with a CRA-sponsored team taking part in a nine-team league composed of military and contractor personnel.

Eighteen games will be played. Astro cagers copped two of their first three games in loop play.

Team members include Bob Finney, Norm Peters, Tom Hunt, Dick Edwards, Dave Hendricks, Al Horn, George Bennett, Bill McDonald, Reece Ray, Don Webb, Bob Reed and Bill Bock. Bock is CRA commissioner and co-captain with Tom Hunt.

Lens Club Organizing At Cape Canaveral

CAPE CANAVERAL—Organization of a CRA-sponsored Camera Club is all but complete among Astro employees here.

Initial meetings included election of officers, plus mapping out of a program for the coming year. Election results were not available at press time.

OCOTILLO WELLS TRAVELER TARGET

Fresh from co-sponsorship of a Thanksgiving camp-out at Del Mar which drew 103 trailerites, the Astro Travelers are making plans for a New Year weekend trip to the Ocotillo Wells area, Commissioner Art Wrightson reports.



LAST OF LINE—Final Convair Model 440 being readied at Convair SD for delivery passes shake-down flight with flying colors. Checking data following initial flight are (from left) J. S. Carson, co-pilot; Harold Siegenfield, flight engineer; C. T. Scholl, pilot; V. V. Thomason, electronics engineer.

Lower Cost Air Travel Noted As Key to Easing Tensions

Soviet Russia may make a serious appeal for disarmament at the next summit conference, in the opinion of Robert H. Trench Thompson.

Trench Thompson, U. S. manager of British Overseas Airways Corporation, told Convair Fort Worth Management Club members and wives at the November meeting at Ridglea Country Club that Russia is today "motivated by fear of her satellites."

"Russia is scared stiff of Red China," he said, "for Russia knows now that she has created

a 'Frankenstein' which could turn on her at any time."

He pointed out that never in history have the Chinese people been assimilated by another country.

"The way to win today's ideological fight for men's minds and souls," he said, "is to get at the people . . . you visit them, and they visit you."

"Fortunately, a combination of better aircraft and lower-cost travel will make extensive travel by ordinary people possible in the years ahead."

Naval Office Title Changed to BuWeps

Title of the Navy office at Convair San Diego has been changed to Bureau of Naval Weapons Representative, effective Dec. 1.

With the consolidation of the Navy's Bureau of Ordnance and Bureau of Aeronautics at Washington, D.C., the former nomenclature of BuAer has been abolished. The new title abbreviation is BuWeps.

Capt. D. M. Wieshaupt has been representative of the Naval unit at Convair SD for the last two years.

Last of the Convair-Liner 440s left San Diego last week for a delivery flight to Mohawk Airlines at Utica, N. Y., marking the end of a long line of propeller transports built at the San Diego plant.

Since initial flight of the first 240 in March, 1947, Convair SD production lines had turned out 1,075 of the twin-engine 240, 340, and 440 transports. Convair-Liners were phased out early this year when the Convair 880 jet transport went into production at SD Plant 1.

The Model 440 Metropolitan, last of the series, began rolling off the assembly line early in 1956. A total of 176 were built for domestic and foreign airlines. Of those aircraft remaining when production ended, all now have gone to new owners.

Deliveries this year saw six going to General Motors Corp., some to join an executive fleet at Detroit, Mich., and others going to Los Angeles for modification to a turbo-prop version.

Five of the aircraft have been purchased by Mohawk Airlines. The two transports purchased some time ago by REAL Airlines were due to leave for Brazil the first of this month, while two of the last 440s have arrived in Spain for the Iberia line. One 440 was sold to Mrs. Sarah Mellon Scaife and another is stored at Cheyenne, Wyo., pending delivery to Hughes Tool Co.

Convair San Diego field service representatives sent out to the last 440 customers are G. A. Pohlman at Madrid, Spain, for Iberia; L. L. Paul to General Motors in Los Angeles and W. R. Copeland to Detroit, also for GM.

C. E. Hill is Convair resident representative for Mohawk Airlines and E. J. Griffin is stationed at Sao Paulo, Brazil, for REAL.

Last shakedown flight the last of November saw C. T. Scholl at controls of the last 440 as pilot; J. S. Carson, co-pilot; Harold Siegenfield, flight engineer; and V. V. Thomason, electronics engineer.



FIRST ONE—First Convair-Liner 240 built at Convair SD, now owned by The Garrett Corp., returned to San Diego recently to bid adieu to last 440. Above view shows plane before first flight March 16, 1947. Crew (from left) was R. R. Rogers, then director of flight and veteran test pilot, now deceased; E. D. Shannon, co-pilot; L. J. Bordelon, chief flight engineer; J. T. Ready Jr., chief flight test engineer; and William K. Ehmcke, flight test engineer.

Last of Famous Series Of SD Convair-Liners Gets 'Job' With Mohawk

Convair 440s Flying In Dozen Countries

Convair-Liner 440s are flying now for 42 companies, individuals, and airlines in 13 countries throughout the world. Six airlines in the United States and 19 foreign airlines have the twin-engine transports flying regular routes. Model 440s are flying in Canada, Italy, Australia, Belgium, South America, Switzerland, Japan, Spain, Germany, Finland, Norway, and Indonesia.

With the 440s maintained at ready status ever since they rolled out of final assembly, the 1½-hour shakedown was called "routine" by the crew. The sturdy Convair-Liner was put through its paces at 10,000-feet altitude over the coastline north from Point Loma.

It was slated to have a couple of check flights before going through certification flight for the Federal Aviation Agency, last step before delivery.

Social Security Tax Will Rise

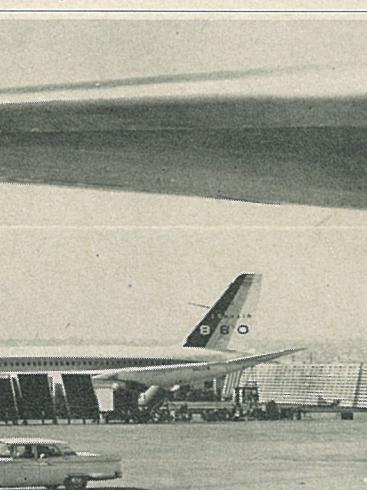
Millions of people across the United States will do a double take when they see their first pay check for 1960.

Reason: an extra one-half of one per cent will be deducted for Social Security tax.

According to H. R. Bean, Fort Worth supervisor of payroll, this means that employees will then be paying three per cent on earnings up to \$4,800. Employers match this dollar for dollar.

If earnings amount to more than the \$4,800 maximum, Social Security tax will be \$144 in 1960, compared with \$120 in 1959.

The law authorizing this increase was passed in mid-1958. It is in line with a gradual Social Security tax increase which has raised the deduction from one per cent in 1949 to the present three per cent.



UNUSUAL SIGHT—One of few pictures taken of Atlas missile and 880 together was snapped in yard at Plant 1, SD. Atlas had just finished checkout operations in Bldg. 4 and was being trucked back to Astronautics. Yard is regular "roost" for 880 fleet now in flight test. Overhead in foreground is tail section of another 880.

Scrolls Recalling Service in B-36s Presented by SAC to Ex-Crewmen

SAC crewmen who flew B-36s are receiving individual scrolls attesting to their service in the airplane which for nearly a decade was the mainstay of SAC's global bomber force.

The certificates are on parchment, suitable for framing, and carry a reproduction of the American eagle and the B-36 under the heading of "The USAF Strategic Air Command, Underwriters of American Security."

Eligible are flight crew members, crew chiefs and assistant chiefs, line and flight chiefs.

SAC is undertaking to issue the scrolls to all former B-36 men now on active duty. Eligible former B-36 men no longer in SAC may obtain scrolls by applying in writing to the information officer of the base where they performed duty. Proof of assignment should be included.

Emmett McCabe, Convair direc-

tor of advertising, sparked the project and Convair supplied the engraved scrolls, 9,500 of them.

B-36s, built by Convair at Fort Worth, first entered the SAC inventory in June, 1947. The last production model was delivered to the AF in August, 1954. Gradually replaced by all-jets, the last B-36 was officially retired in a ceremony at Amon Carter Field, Fort Worth, in February of this year and has since become a monument. The airplane is opened to the public Saturday and Sunday afternoons and Convair FW volunteers conduct the tours. Convair FW Management Club is responsible for upkeep.



FOR B-36 MEN—Lt. Gen. Francis H. Griswold, SAC Vice Commander in Chief, right, presents first of B-36 scrolls to four other SAC generals who served in B-36s. From left, Maj. Gen. W. K. Martin; Maj. Gen. E. B. Broadhurst; Brig. Gen. C. M. Eisenhart; Maj. Gen. J. V. Edmundson.

AULD LANG SYNE—Curious examine last B-36 at Amon Carter Field, Fort Worth. Photo was made last summer (accounting for shirt sleeves). Convair FW men conduct tours weekend afternoons.